

August 4, 1986

Chemical Marketing Reporter

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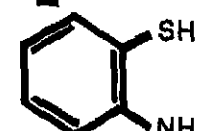
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CHEMICAL MARKETING REPORTER's market index of chemicals and related materials (100=1974 average), based on 97 key commercial chemicals, appears alongside with data for two weeks ago, last month and last year.	July 11, 1986	July 3, 1986	June 13, 1986	July 12, 1985
	152.47	152.62	152.45	158.65

Chemical Prices Start on Page 27

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Chemical Marketing Reporter



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INSIDE CMR

BOOTS TO US: Baxter Travenol's sale of almost all of its pharmaceutical business to Boots, providing a long-sought entree to the market for the UK firm. **Page 3**

BASF REBUFF: Regional labor board rules that locked out OCAW workers did not engage in unfair labor practices at Geismar. BASF says it will appeal to Washington. **Page 3**

PHILLIPS AHEAD: The company says it has essentially reached its announced goal of selling off \$2 billion in assets as part of its debt reduction program. **Page 9**

ACRYLIC SHEET: Continuous sheet capacity expected to come on stream this year may bring a bigger overcapacity problem, some producers said last week. **Page 5**

PESTICIDE REFORM: The Senate Agricultural Committee expects to complete work on legislation overhauling the nation's basic pesticide law this week. **Page 7**

FERTILIZER USE: Fertilizer disappearance was 10 percent lower overall compared to last year in latest monthly comparison prepared by industry organization. **Page 48**

TEXTILE VETO: Fiber industry spokesmen vow to fight on in Congress following the vote to sustain veto of measure to protect US from textile imports. **Page 20**

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Waste Sites Debated

3

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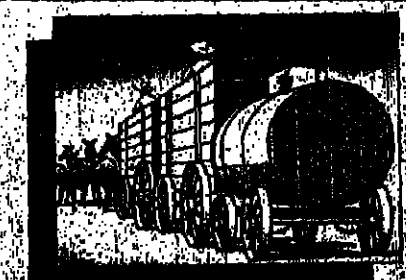
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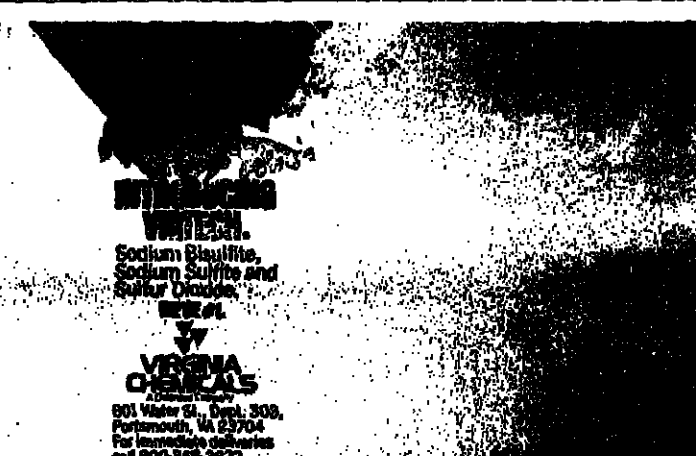
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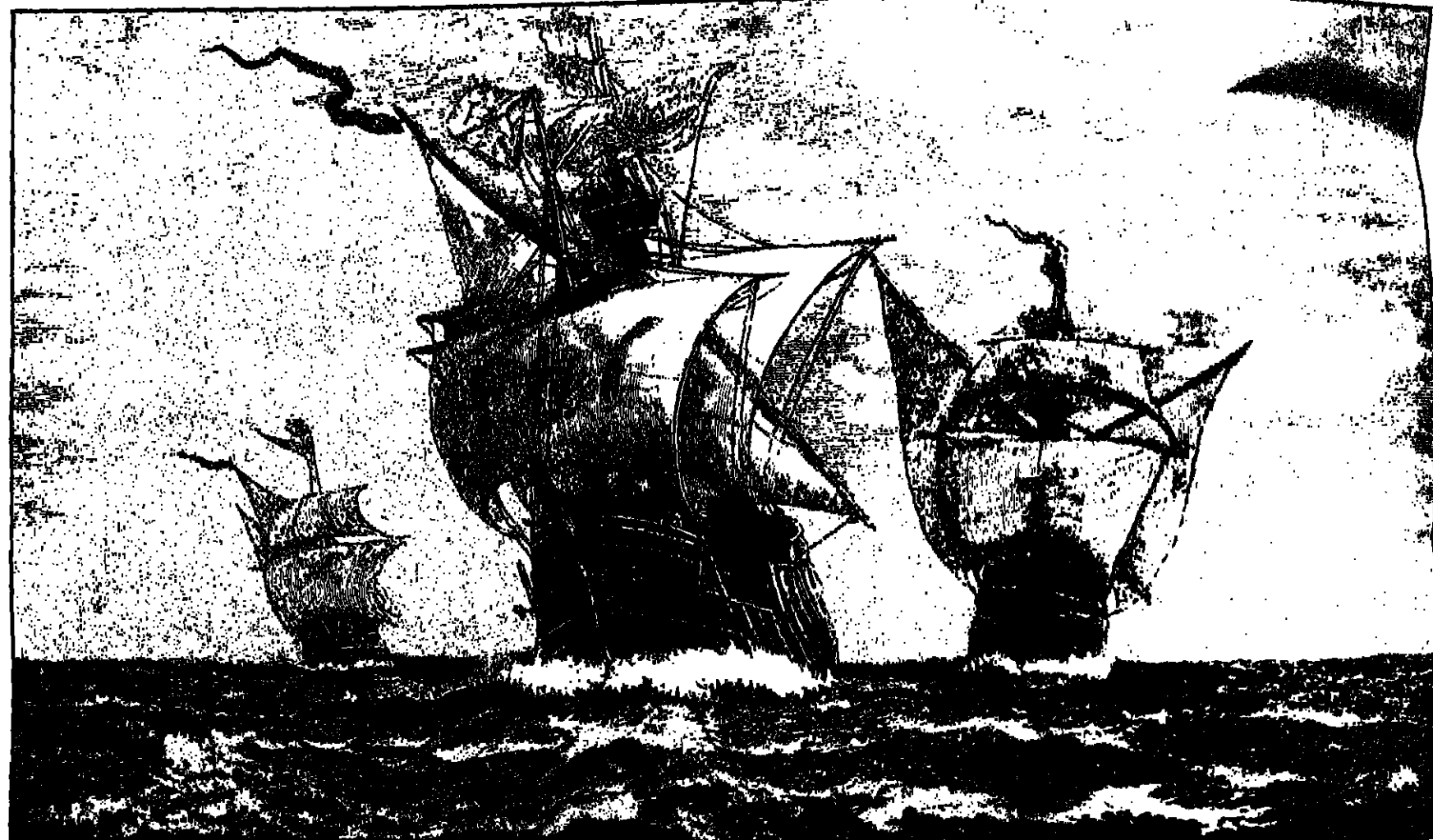
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Waste Facility Sites Debated

A hazardous waste treatment facility being built near the Ohio River in Henderson, Ky., by a Union Carbide subsidiary poses an "unreasonable risk" to public health and safety, two citizens' groups charged last week at a congressional hearing.

But Edward V. Lower, chief executive officer of Union Transformer Services, Inc., defended his company's technology for destroying polychlorinated biphenyls (PCBs) as "an environmentally sound and cost-effective means."

The exchange came as the House Energy and Commerce subcommittee on commerce, transportation and tourism held a hearing to examine the status of regulations being developed by Environmental Protection Agency to govern the location of hazardous waste treatment, storage and disposal facilities.

Rep. James J. Florio, (D-N.J.), the subcommittee

chairman, said the regulations will fill "a gaping loophole" in the current law that allows landfills to be located in close proximity to drinking-water supplies and densely populated areas.

"Current regulations only call on EPA to examine the potential for such catastrophic events as floods and earthquakes, even if a landfill operates only a few feet above an underground aquifer," Rep. Florio explained.

Marcia E. Williams, director of EPA's office of solid waste, said the agency will propose the regulations in September 1977 and expects to finalize them a year later. Congress ordered EPA to issue the regulations

Continued on Page 23

UNION SERVICES TRUCKS: Lined up and ready to go to service PCB-laden transformers. Siting of Union plant was focus of hearing last week.



BASF Charge Against Union Dismissed by Labor Board

BASF Corporation says it will appeal a ruling by the National Labor Relations Board that the Oil, Chemical & Atomic Workers International Union has not engaged in unfair labor practices in connection with a two-year lockout of OCAW workers at BASF's Geismar, La., plant.

In a complaint filed this Spring with NLRB's regional office in New Orleans, La., BASF charged, among other things, that OCAW obtained and publicly disclosed confidential and proprietary BASF financial data as part of a "corporate campaign" against the company (CMR 6/23/86, pg. 14).

"We reviewed the evidence and decided that just wasn't correct," Frank Malone, regional director of the NLRB in New Orleans, said last week.

OCAW has raised questions about the safety of the Geismar plant, saying the company is "inviting another Bhopal disaster" there by using temporary personnel (CMR 3/10/86, pg. 3). BASF has vigorously denied the allegations, complaining that the union is attempting to win a labor dispute "through threats, propaganda, contrived media events and false allegations."

In dismissing all charges brought against the union, Mr. Malone said the "evidence was insufficient" to support BASF's allegations that OCAW's representatives was bargaining in bad faith.

He said "both sides have bargained hard," but that several issues remain unresolved, in

what he described as a "classic conflict" between the company and the union.

Those issues involve wages, health-care benefits, subcontracting and seniority.

Union and company representatives met briefly last Tuesday morning for the first time since early June. According to Les Story, manager of the Geismar Works and chief negotiator for BASF, the union was seeking the company's reaction to a counter offer submitted earlier.

According to Mr. Story, the company "expected dismissal" of its charges by the regional NLRB office, saying this is the "first instance of union harassment" on such a large scale. The company's appeal will be filed with the NLRB's general counsel in Washington, D.C.

OCAW said dismissal of the BASF charges against the union "underscores OCAW's allegations that the real perpetrators of violations of workers' rights is BASF." The union has filed unfair labor practice charges of its own against BASF, which are still under investigation.

The OCAW workers, numbering 370 at the Geismar plant, were locked out on June 15, 1984, after rejecting the company's "final offer" for a new contract. BASF proposed a three-year contract, with an eight-month wage freeze in the first year of the contract. The company justified the wage freeze, saying a survey found the Geismar workers to be the highest paid in the Gulf Coast region.

The union sought a one-year contract with an immediate 8 percent increase.

Rhone-Poulenc, Rohm & Haas Collide in Herbicide Market

Rhone-Poulenc says that two additional patents it obtained for its post-emergent herbicide "Tackle" late in July will strengthen its position in the patent litigation with Rohm and Haas which has been pending in the Delaware Federal District Court since September 1978.

The litigation concerns acifluorfen, the principal ingredient in "Tackle" and in Rohm and Haas' herbicide "Blazer." The litigation was originated by Rohm and Haas, which sued Mobil Agricultural, the original developer of "Tackle."

Mobil countersued, but never obtained a registration for "Tackle." When Rhone-Poulenc bought Mobil's agricultural chemical business in 1981, it inherited the litigation as well as "Tackle."

Now, Rhone-Poulenc says, Environmental Protection Agency has granted a registration for the herbicide. Although it was late in the season to initiate a full marketing campaign (in mid-April), the company claims that the market introduction of its version of the herbicide "was a resounding success."

The two new patents, Re. 32,215 and Re.

32,216, were granted on July 22 and July 29 over the objections of Rohm and Haas and cover the manufacture, use and sale of both "Tackle" and "Blazer", according to Rhone-Poulenc.

"These two patents, together with Rhone-Poulenc's US patent 3,879,547, which was granted September 7, 1976, cover every pound of 'Blazer' ever manufactured and sold by Rohm and Haas in the United States," Rhone-Poulenc says.

Both of the two companies are now actively pursuing the previously dormant litigation, which their attorneys last week described as being in the pretrial stage.

A spokeswoman for Rohm and Haas said that company would restrict its comments on Rhone-Poulenc's claims because of the litigation, but that it doesn't agree with them. As for the market, she said, "We feel we have developed a very strong position since 1980," and that is unlikely to be much affected by the introduction of "Tackle," at least in the near term.

Acifluorfen is in the phenyl ether class of herbicide. Rohm and Haas obtained its patent in 1973.

Chemical Marketing Reporter

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Boots Expands in US Via Baxter Travenol

Baxter Travenol Laboratories set the stage for its virtual withdrawal from the pharmaceutical business last week when it agreed to sell its Flint prescription drug unit to Boots Company of the UK for as much as \$600 million.

In July, Baxter Travenol agreed to sell its American Critical Care unit, which makes critical care and cardiovascular drugs, to E.I. du Pont de Nemours & Co. for \$425 million in cash. The company completed the sale of its American Medical Optics unit in May to SmithKline Beckman Corporation for \$165 million.

Proceeds from the sales of these businesses will be used mainly to pare the \$2 billion in debt Baxter Travenol accumulated in its \$3.7 billion acquisition of American Hospital Supply Corporation last year.

Baxter Travenol will now focus on medical and surgical manufacturing and distribution, information systems for the medical community, and home care clinics and labs, leaving a generic drug distribution operation as its only link to the pharmaceutical business.

Under the agreement with Boots, the UK firm has agreed to pay \$655 million up front for Flint, and as much as \$45 million more, based on the future sales performance of Flint's chymopapain products, "Discase" and "Chymodactin."

The two products "are not doing very well at the moment," but Boots hopes to turn them around, according to Bernard Theobald, corporate development director of Boots. However, "we weren't prepared to pay on the basis of 'it might happen,'" he explains.

Boots is financing the acquisition through the issuance of around 180 million new shares of stock valued at approximately \$5.05 per share. The entire issue was placed last Wednesday with institutional investors, although some or all of the new shares could be recalled and sold to Boots shareholders.

Boots is paying a steep premium for Flint, which recorded pre-tax profits of \$39.1 million last year on sales of \$53.7 million. Boots acknowledges, "The company was willing to do so, because it has been looking to buy a US drug business 'for a number of years' and there are 'very few occasions when some-

thing becomes available," says Mr. Theobald.

Wall Street analysts say the prevailing rate for drug businesses these days is 17 times pre-tax earnings, which is about what Boots is paying.

Although Boots has an existing US subsidiary, Boots Pharmaceuticals Inc. in Shreveport, La., the firm's participation in the US market is mostly through licensing arrangements with American firms.

Upjohn, for example, markets Boots' "Motrin" drug here for the treatment of rheumatism.

Boots will immediately combine the sales forces of Flint and its US subsidiary and eventually merge the two entirely into one

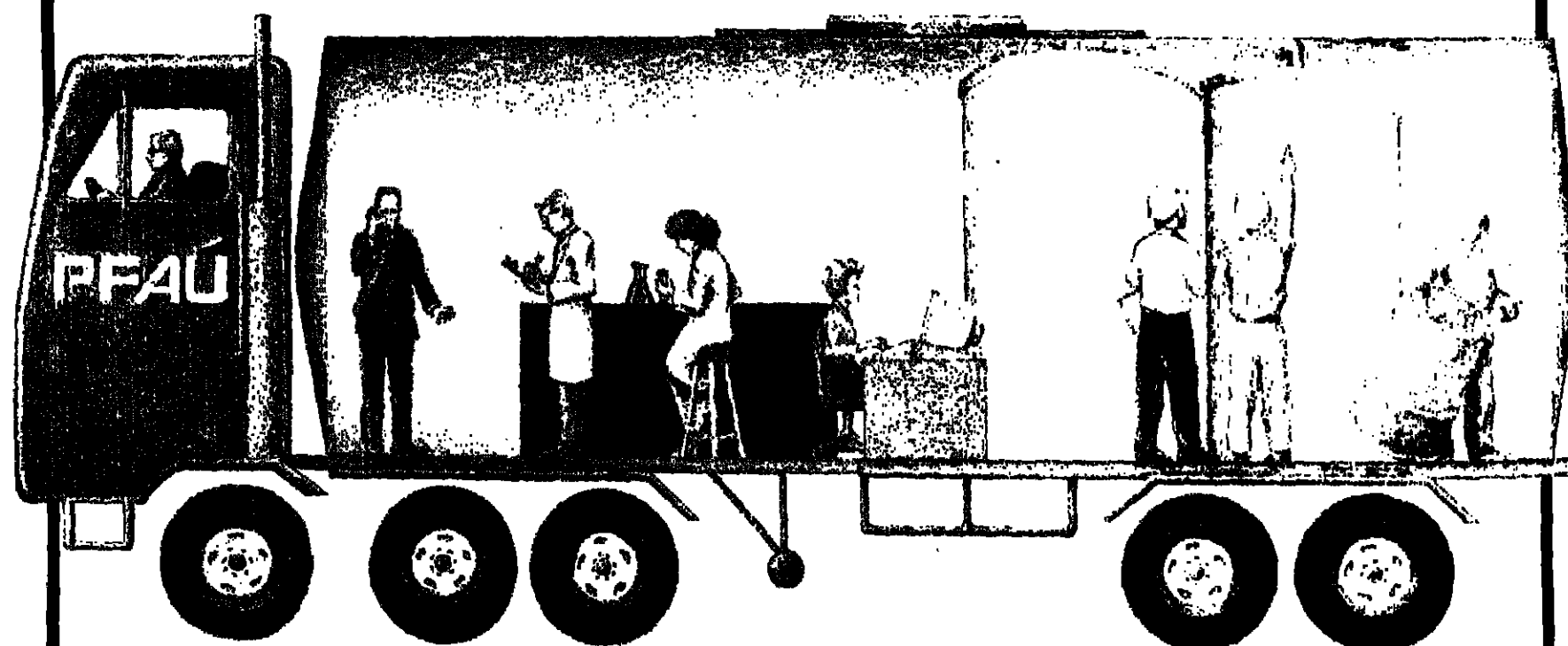
Continued on Page 22



SURGICAL GLOVES: With sale of pharmaceuticals operation to Boots, Baxter-Travenol has applied almost completely to hospital products and services, retaining only a genetics collection to the drug field. These "Tiffex" gloves are specially designed for surgeons.

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Hazardous Waste Treatment

More stringent requirements for drivers who transport hazardous materials as well as national licensing standards were approved last week by a Senate panel.

"The public is entitled to professional and unimpaired performance," said Sen. John Danforth, R-Mo., chairman of the Senate Commerce Committee, as the bill cleared the panel.

The House has not begun work on the measure to reauthorize the Hazardous Materials Transportation Act whose main critic is the Reagan Administration. It says rules being formulated in the Transportation Department eventually should make the measure unnecessary.

There was no dissent against the Danforth bill, which would authorize DOT to cut Federal highway funds by 5 percent for states not in compliance with the standards by Sept. 1, 1990.

An additional 5 percent annual cut would be approved for states that remained out of compliance.

Under the legislation, DOT would establish minimum licensing standards for the states by March 1, 1988. They would include written and behind-the-wheel tests for all commercial drivers and special provisions for drivers of tank trucks and other vehicles containing hazardous wastes.

Hazardous materials drivers would be required to pass tests demonstrating their knowledge of hazardous materials regulations, properties and handling of hazardous materials, and emergency response procedures.

They would also have to demonstrate their ability to handle the vehicle and operate safety equipment.

A study released by the Office of Technology last month said more than 80 percent of truck accidents and spills involving hazardous materials are due to human error either by drivers or other workers such as loaders.

Sunflower Oleic Raised By Lubrizol Corporation

Later this month, a division of Lubrizol Corporation will begin harvesting a new strain of sunflower that has a 400 percent higher concentration of oleic acid in the crude sunflower oil than conventional crude oil. The company is also working to develop a new form of rapeseed with a sharply higher concentration of erucic acid than current forms of the crop.

The company's aim is to market 80 percent oleic acid crude sunflower oil as a specialty product to the food and chemical industry. The company says it sells the oil as a "premium vegetable oil" in a wide range of edible products ranging from frying oil for potato chips to infant formula.

As an industrial chemical, Lubrizol says the high oleic acid is marketed as a high performance, specialty product in a wide range of applications including detergents, plasticizers, and lubricants.

The new plant is the product of a broad range of research and development by Lubrizol scientists that combined mutagenesis, recombinant DNA technology, and pollen cross breeding techniques. About 90,000 acres of the seed were planted this year and Lubrizol

expects to process 40 million pounds of the crude oil, according to Bruce H. Grasser, vice-president of Lubrizol Enterprises.

The engineered sunflower plant program is run by a unit of Lubrizol called SVO Enterprises Corporation, Columbus, Ohio. Research on the new strain of sunflower was begun by Sigco, a Breckenridge, Minn.-based sunflower seed company which Lubrizol acquired in 1982.

SVO Enterprises, formed in 1984, harvested its first high oleic sunflower crop last year, and processed 6.5 million pounds of crude oil for sale to the food industry.

This year, in addition to marketing the crude oil, Mr. Grasser says the company will offer two high-stability, edible specialty oils in the fourth quarter, and perhaps a chemical derivative of oleic acid. Mr. Grasser says the highly refined and purified oils coming onto the market will prevent foods from turning rancid without affecting the color or taste of the food.

While developing and marketing a premium oil for the food market, Mr. Grasser says the company's making a strong push for the oil into the chemical business, where they

Continued on Page 24

Chemical Firms Join Coalition on Rail Fees

A coalition of more than 2,000 large and small shippers dependent upon the railroad industry for transportation urged the Interstate Commerce Commission last week to revise the current standards employed to determine the financial health of the railroad industry.

"Changes in revenue adequacy determinations are long overdue and will make a significant contribution to providing a more realistic picture of railroad financial condition," the shippers said in statements filed with ICC. The Fertilizer Institute and Chemical Manufacturers Association were among the participants in the filing.

ICC is currently reviewing its system for determining the revenue adequacy of individual railroads. The present method is based on a return-on-investment/cost of capital standard, which has been the subject of much controversy.

Under the system, ICC has found that no Class I carriers were revenue adequate in 1984, even though the industry appears to be in good health as demonstrated by recent investment moves, such as Norfolk Southern's bid for Conrail.

An accurate determination of the railroads' financial health is of critical importance to shippers because the financial health of a railroad — or its revenue ade-

quacy — is a factor in determining a captive shipper's transportation rates.

Until a railroad reaches revenue adequacy, ICC grants railroads great rate-making freedom even where no practical competitive transportation alternative exists.

Shippers have long complained, and the ICC has recently acknowledged, that current standards for railroad revenue adequacy do not accurately reflect the financial condition of the railroad industry.

The coalition urged the ICC to support revision to assure that the revenue adequacy analysis focuses exclusively on rail-related activities of each carrier. Currently, inclusion of non-rail-related information, such as income tax expenses for non-rail affiliates, distorts the ICC's analysis, the shippers said.

The group also recommended the continued use of original cost accounting. Dr. Alfred E. Kahn, an economist who joined in the filing, said the original cost standard is a "fully sufficient and valid test of revenue adequacy, and is far superior to replacement cost on grounds of accuracy, verifiability, and administrative practicality."

The coalition also urged ICC to support treatment of deferred taxes as a zero-cost source of capital, use of the embedded cost of debt in determining the overall cost of debt, and the actual book values of debt and equity for determining capital structure mix.

Pesticide Reform: Gain This Week?

The Senate Agriculture Committee expects to complete work on legislation overhauling the nation's basic pesticide law this week before Congress adjourns for its Summer recess, but the panel must still deal with two controversial issues — patent term restoration and data compensation.

The committee has been considering a bill approved by the House Agriculture Committee June 18 to reform and reauthorize the Federal Insecticide, Fungicide & Rodenticide Act.

The Senate panel, chaired by Sen. Jesse Helms (R-N.C.), has agreed to most of the major provisions of the House bill, which primarily seeks to speed up the Environmental Protection Agency's review, or "reregistration," of approximately 600 pesticide active ingredients that were approved for use before November 1984.

The review is intended to determine whether these building block ingredients meet current health and safety testing requirements, and to assess the safety of continued registration of the chemicals.

However, the senators agreed last week to amend the House bill to include a comprehensive program for protecting groundwater against pesticide contamination.

Sponsored by Sen. Paula Hawkins (R-Fla.), the amendment would require EPA to establish groundwater residue guidance levels for pesticides that have the potential of leaching

into subsurface water, or have been detected at three sampling points or in a drinking well that serves over 10,000 people.

The provisions, which have the support of EPA, the chemical industry and environmental organizations, are expected to provide a

Continued on Page 22



Robert P. Bauman, vice-chairman of Textron Inc., who has been named chairman of the Beecham Group, the \$4 billion pharmaceuticals and consumer products company based in Middlesbrough, England.

Hercules, Reichhold Mull Tall Oil Joint Venture Firm

Hercules Incorporated and Reichhold Chemicals, Inc. have begun exploratory discussions that could lead to the formation of a joint venture for the production of tall oil and wood rosin, fatty acids and byproducts from crude tall oil and wood stumps.

The talks are directed toward determining the potential benefits of combining the two companies' manufacturing facilities for these primary products, RCI says.

The result would be an independent joint-venture company which would provide wood and tall oil rosin and fatty acid raw materials for the resin manufacturing needs of both Hercules and Reichhold.

Both companies currently have operating tall oil fractionating facilities for the manufacture of rosin and fatty acids. In addition, Hercules has an active wood rosin extraction plant in Brunswick, Ga.

The two companies use the materials in-

ternally in the manufacture of a variety of resins. The resins businesses would not be included in the venture, the companies say.

The purpose of the proposed joint venture is to even out the supply and demand balance, as well as to have a ready source of raw material, a Reichhold spokesman says. By combining resources, the companies can protect against a shortfall of one of the products on one side against a shortfall of another material on the other side, the spokesman says.

Hercules and Reichhold are the only two independent producers of the materials involved. Competing producers are vertically integrated paper companies, most notably Georgia-Pacific, Union Camp, and Westvaco. The talks are considered a signal to the industry that Hercules and Reichhold are determined to stay in the business.

Industry analysts suggest the proposed joint ventures is a cost-saving measure

Continued on Page 11

DuPont Philips Venture Opens US Center for Optical Disks

Philips & Du Pont Optical Company Nieuwegein, the Netherlands, has announced the opening of a new marketing and technical center within the United States.

The PDO facility, located at Foulkstone Plaza near Wilmington, Del., will be responsible for marketing and technical applications development of optical discs for the information storage and retrieval markets worldwide.

PDO is the result of a joint venture between the Du Pont Company and N.V. Philips of the Netherlands. Both companies have combined their existing compact disc (CD) and high-density information storage disc operations, with the goal of becoming the world's pre-eminent supplier of optical discs.

According to Robert Spengler, PDO's director of marketing, the company is expected to generate annual sales of about \$1 billion in the early 1990's.

He said, "PDO has unmatched technological, manufacturing and marketing strengths. The initial assets of the company include the

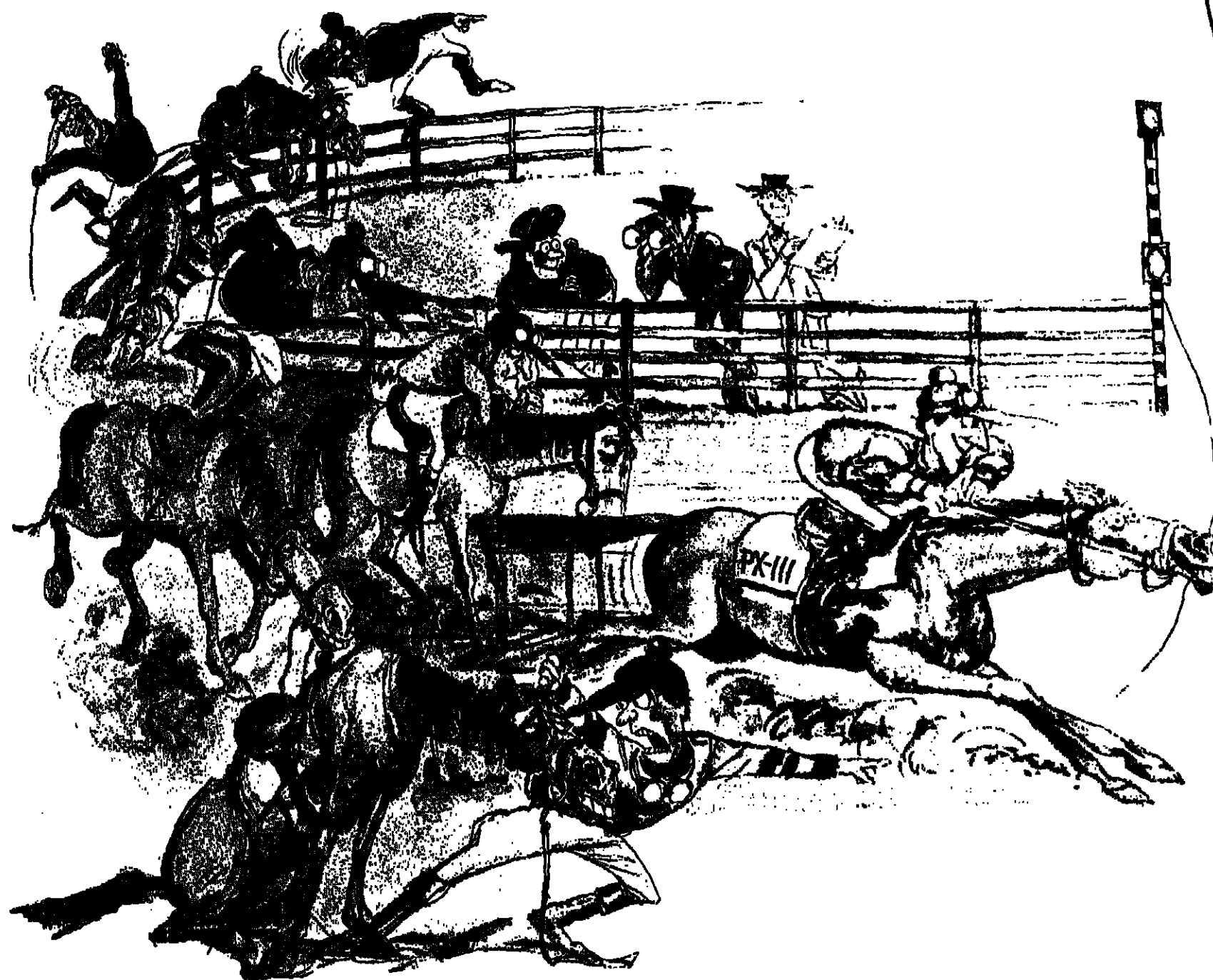
world's largest CD-audio manufacturing facility in Hanover, West Germany; a video disc and data disc operation in Blackburn, England; and pilot facilities at Eindhoven in the Netherlands and Wilmington that are producing write-once discs of various sizes and capacities.

"PDO also has in place \$150 million in initial capitalization, and a further \$400 million in facilities investment will be added by 1990."

Mr. Spengler noted that PDO's annual research and development program is anticipated to be \$80 million by 1990 and that by then the venture will employ approximately 3,500 people at about 10 facilities worldwide.

"In addition to opening the new marketing and technical center, we also have construction well under way on our first US manufacturing plant which will become operational before the end of this year. We plan to be delivering audio discs in stores at this time for this year's Christmas shopping. This manufacturing facility is located in Kings Mountain, N.C., he said."

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News Capsule

Monsanto Sells Division

Monsanto Chemical Company, an operating unit of Monsanto Company, has completed the sale of the Equipment Division of Radiation Dynamics Inc., Melville, N.Y., to Sumitomo Heavy Industries Ltd. of Tokyo for an undisclosed amount. Radiation Dynamics manufactures high energy electron beam accelerators for the tire, medical, wire and cable, electric utilities and food industries. Monsanto said the sale is designed to better position the company to attain its strategic objectives.

Grow Group Buys Assets

Grow Group Inc. has completed the acquisition of the business and certain assets of the Chemical Packaging Division of Georgia-Pacific Corporation for \$38 million in cash. Included in the purchase is the "Aqua Chem" pool chemical product line and the division's private label and brand name household cleaning products. The purchase price is subject to a post-acquisition audit. Grow Group produces specialty chemical coatings, private label household products and OTC pharmaceuticals, health and beauty aids.

Cyanamid VP Appointed

W. Perry Brown, corporate vice-president and director of American Cyanamid Company's personnel division, has been appointed to the White House advisory committee on federal pay, which was established in 1970 to advise the President on salary issues for Federal employees. Mr. Brown's term expires in January 1992. Prior to joining Cyanamid in 1978, Mr. Brown held executive positions with Merck & Co. and Hudson Pulp & Paper Corporation.

BP Signs Accord

BP Chemicals Americas Inc. and Sterling Chemicals Inc. have completed an agreement giving BP exclusive rights to produce from the acetic acid plant at Sterling's Texas City, Tex., site. "BP Chemicals already is the largest acetic acid producer in Europe and this agreement enables BP Chemicals Americas to have a significant presence in the US market as well," the company says. An agreement in principle had been announced in June.

Rohm and Haas Buys

Pleskon Electronic Materials Ltd., a subsidiary of Rohm & Haas Company, has acquired Morton Thiokol's Singapore plant and the rights to the epoxy encapsulants which are manufactured there. The products are used by the semiconductor industry for integrated circuits, relays, resistors and capacitors. Terms of the acquisition were not disclosed.

Alcoa Sells Unit

Alcoa has sold Buckeye Molding Company, a plastic packaging subsidiary in New Vienna, Ohio, to Packaging Resources Inc. of Mt. Carmel, Pa. Packaging Resources is a wholly-owned subsidiary of Peck-Lynn Group Ltd., Chicago. Buckeye Molding, which has annual sales of about \$30 million, manufactures plastic food packaging products. Packaging Resources, with annual sales of more than \$25 million, manufactures and sells packaging materials for the food and beverage industries.

Dover Enters Market

Dover Chemical Corporation, a wholly-owned subsidiary of ICC Industries Inc., has entered the organophosphate market with the completion of a new 7,500-square-foot plant in Dover, Ohio. The plant is capable of producing "volume quantities" of diphenyl isodecyl phosphite, phenyl didecyl phosphite and TNPP, used by the plastics, rubber and allied products industries.



Robert A. McMillan, who has been elected vice-president and treasurer of B.F. Goodrich Company. He was previously director of planning and development.

EPA Okays A Biotech Test At Montana Site

Environmental Protection Agency says a Montana State University scientist can proceed with the small-scale field testing of four strains of a fungus, which has been genetically altered by exposure to ultraviolet irradiation.

Dr. David Sands is proposing to field test altered strains of the fungus *Sclerotinia sclerotiorum* to assess their efficacy as herbicides against the weeds Canada thistle and spotted knapweed.

EPA says the field test will be carried out at a site in the state of Montana over a two-year period. The test will cover an area that is smaller than one acre.

The agency says that based on the data that it has collected on the fungus, it has determined that the potential risk of small-scale field testing of the altered strains is minimal. Consequently, EPA says it will not require an experimental-use permit.

Hoechst Hikes Its Rigid PVC By 50 Percent

American Hoechst Corporation plans to expand its capacity for rigid polyvinyl chloride film by nearly 50 percent.

The company will install, at its Delaware, City, Del., plant, a new calendar line using new technology developed in cooperation with Hoechst engineers in Europe.

"The US market for rigid PVC film will continue to grow at rates well in excess of the gross national product, and this investment will enable us to improve our leadership position of producing and marketing rigid PVC film and sheet," says David R. Beresford, vice-president and general manager of the American Hoechst PVC film products business unit.

The project is expected to cost more than \$10 million.

Drug Bill Gains

The Senator Labor & Human Resources Committee last week approved legislation to allow the submission of abbreviated new animal drug applications for generic equivalents, and to restore up to five years of the patent terms for pioneer animal drugs to make up for exclusive marketing time lost in the Food & Drug Administration approval process.

Phillips Petroleum Reaches Debt Goal

Phillips Petroleum Company says it has essentially reached its goal of selling off \$2 billion in assets as part of its debt reduction program begun early last year.

The company says the recent sale of carbon black operations in US and Europe, coupled with the closing of a sales contract with Shell Oil Company covering several onshore and offshore oil exploration and production properties, has pushed the total from the asset sales program to over \$1.95 billion. Negotiations for the sale of some other "minor" assets continues, the company says.

The latest \$250 million in assets sales completed by Phillips include a 135 million-pound-per-year carbon black plant located in Orange, Tex. which was sold in June to J.M. Huber Corporation.

At about the same time, Phillips sold a carbon black company in Hannover, West Germany to Columbian International Chemicals Corporation. The oil company also sold its minority interest in Negromex, a company that makes rubber, carbon black and other chemicals.

On August 1, Phillips sold its Huntington Beach, Calif. oil field to Shell. The field, 27 miles south of Los Angeles totalled almost 6,000 acres of offshore and onshore lease sites and was producing about 12,600 net barrels of oil daily.

In addition, Shell oil bought Phillips Beta

Field, a 1,650 barrel per day Federal lease site just north of Huntington Beach, and five undeveloped offshore blocks called the Lion Rock Unit, located north of Point Arguello. Shell also purchased several smaller tracts on shore and offshore of California.

By the end of 1988, C.J. Elias, Phillips' chairman and chief executive officer says the company's debt will fall below \$8 billion, down from the \$8.6 billion peak reached in early 1985. A large portion of the debt was accrued in funding off takeover attempts by T. Boone Pickens and Carl Ichan.

Phillips sold or contracted to sell \$1.4 billion in assets through year-end 1985. Two of the larger properties sold last year were Geysors Geothermal Company, which went to Freeport McMoran last Fall for \$215 million, and Netherlands Oil & Gas properties, which was sold last September to Newmont Oil Company for \$165 million.

In 1986, Phillips turned its attention toward its chemical properties, particularly its large stake in the ailing carbon black industry.

In February, Phillips sold its Midwest Fertilizer Company unit and American Fertilizer & Chemical Company unit to CPEX, Inc. and its 49.8 percent stake in a Belgium petrochemical plant to Petrochim SA.

Then the company began selling its carbon black units. In April, deals were closed to sell the 275-million pound per year carbon black unit in Borger, Tex. to Sid Richardson Carbon & Gasoline Company.

NL's 'Pill' Overturned

Federal Appeals Court in New York last week agreed to review a ruling, handed down earlier in the week in Federal Court in the same city, that NL Industries, Inc.'s "poison pill" anti-merger defense is illegal.

NL is defending itself against a hostile takeover bid by a group of investors led by Harold Simmons, of Dallas, Tex. Through their vehicle, NL Acquisition Corporation, the investors are in the midst of a tender offer for NL's shares.

The Second US Court of Appeals will hear arguments on August 28 on NL's anti-takeover measure, which entitles stockholders to purchase shares at half-price after any unapproved acquisition of NL. Meanwhile, the acquisition group has been enjoined from purchasing any additional NL shares. The group now claims

ownership of 28 percent of NL's 60 million outstanding common shares.

Judge Vincent L. Broderick of Federal Court had struck down the anti-takeover measure, terming it an "illegal device" because it would effectively bar anyone from taking over the company. NL's lawyers had noted that more than 130 companies, including Allied-Signal Inc., J.C. Penney Company and Time Incorporated have adopted such anti-takeover measures.

NL's lawyers disputed Judge Broderick's contention that NL's "poison pill" is more restrictive and discriminatory than others.

NL said that it intends to continue vigorously to seek to uphold its rights plan "and the protection it affords NL's shareholders against the inadequate tender offer by the Simmons Group."

OPEC Oil Move Prompts Shift In Policy of US on Reserve

President Reagan has decided to fill the Strategic Petroleum Reserve at a 750-million-barrel level as "the best defense" against the impact of rapid crude oil price hikes and supply interruptions, the White House said last week.

The decision was announced shortly after OPEC agreed on sharp production cuts for two months in an attempt to restore slumping oil prices.

President Reagan made the decision after a domestic policy council meeting, according to spokesman Larry Speakes.

"Reaffirmation of our goal of a 750-million-barrel Strategic Petroleum Reserve demonstrates the President's continued leadership and commitment to our allies that holding strategic stocks is the best defense against the effects of rapid price escalation or supply interruptions," Mr. Speakes said.

The reserve was created in the Carter Administration to maintain an emergency supply of oil in case of price and diplomatic instability among Middle East oil-producing nations.

Prices are relatively low now, although they may rise as the result of OPEC's decision to limit production, Energy Secretary John Herrington said. He believes oil prices

will eventually settle somewhere \$15 and \$20 per barrel.

Opponents have cited budgetary restraint as a reason for not filling the reserve, which now contains about \$63 million barrels, most of it purchased from Mexico.

"The President committed the Administration to continue filling the reserve through fiscal year 1987," Mr. Speakes said. "He gave Mr. Herrington the discretion to exceed the current congressionally approved rate, should oil prices make this an economically attractive choice."

He said President Reagan also urged other oil-consuming nations to take similar action, "stressing that strategic stockpiles are the best defense against world oil supply disruption."

The Energy Department has been filling the reserve at a rate of 50,000 barrels per day under congressional approval that lasts until September 30.

Mr. Herrington said he has been a proponent of "an aggressive fill rate... as aggressive as we can get with these prices." He said he would like to see the government add 100,000 barrels per day, but acknowledged that the tight budget would likely rule out that plan.



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OILS, FATS & WAXES

Hercules, Reichhold Mull

Continued from Page 7

aimed at consolidating the newer, higher-quality facilities of both companies, while eliminating the ones that may need expensive repairs.

Rather than run several small capacity plants of varying degrees of efficiency, the two companies would combine their best facilities to form one or two "world class" capacity operations, and abandon older facilities, the sources say.

This is thought unlikely, right now, however, as the high level of demand for the rosin and fatty acids would make it unwise for the companies to shut down production facilities at either company.

Hercules plants considered potential candidates for any joint venture that may arise from the talks include tall oil fractionating plants in Portland, Ore.; Franklin, Va.; Savannah, Ga.; and Burlington, Ontario, Canada.

These plants all produce tall oil fatty acids and rosin. In addition, the wood rosin extraction plants in Brunswick, Ga., and Hattiesburg, Miss. would be considered for inclusion. The wood stumps operation in Hattiesburg, Miss. was shut down three years ago and is currently on standby status.

HERCULES' FACILITIES

Reichhold declines comment on which of its plants would be potentially considered for inclusion in a joint venture, saying that it is too early to speculate on the matter. Reichhold has tall oil fractionating facilities in Bay Minette, Ala. and in Oakdale, La.

The tall oil fractionating capacity of all of the plants owned by Hercules totals 177,000 tons per year. This includes all of the plants in the US, as well as the fractionating facility in Burlington, Ontario, Canada.

For Reichhold, the total US capacity is 100,000 tons per year. None of the individual plants owned by either company has a capacity exceeding 85,000 tons per year. Plants which operate at capacities closer to 120,000 tons per year are considered "world class," according to industry sources.

CARNAUBA — The pricing on carnauba wax has remained steady and unchanged for several weeks now. The market has been described as typically quiet for the Summer months, although one dealer reports that he is doing better now than he was last year at this time.

Some traders are expecting higher prices from Brazil this year. Brazilian producers are said to be considering price changes, and may come to a decision this month, a source says. It is pointed out, however, that the Brazilians have been considering a change for some time, and have previously been un-

able to reach a final decision in the amount of time cited.

CORN OIL — The corn oil market received a jolt last week when a significant amount of buying took place. In what was described as an unusually large amount of trading on the domestic market, prices reached the 18c. per pound mark, sources say. The buying was said to be concentrated among three major consumers.

The activity was a surprise because the industry was expecting the corn oil market to follow the general downward trend seen in most of the rest of the oils market. Analysts were unsure if the activity was an indication of tight August supplies or part of an effort to firm up the market.

It is believed that the high pricing cannot

PRICES TRENDLINES

WEEK ENDING AUGUST 8, 1986

CHANGES/UP

Corn oil, Midwest, 1/2c. per lb.
Grease, yellow maximum 10%, 1/2c. per lb.
Peanut oil, Southeast (restricted), 1c. per lb.

CHANGES/DOWN

Coconut oil, NY, 1/2c. per lb.
Cottonseed, 41% bulk, Memphis, \$23 per ton
Cottonseed oil, Valley, 1c. per lb.
Lard, loose, bulk, tanks, Chicago divd., 1c. per lb.
Palm oil, NY, 2c. per lb.
Soybean, 44% bulk, Decatur, \$6.80 per ton
Soybean oil, Decatur, 2c. per lb.
Tallow, inedible, fancy, tanks, divd. NY, 1/2c. per lb.

OILS, FATS INDEX

The Oils, Fats & Waxes Index reflects the prices of 11 representative materials in this sector and the quantity of each produced in 1985.

Aug. 8, 1986 79.18
Aug. 1, 1986 83.30
July 11, 1986 83.56
Aug. 7, 1985 86.48

Chemical Prices Start on Page 32

FRIDAY SPOT PRICES

MARKET CLOSE AUGUST 8, 1986

CRUDE VEGETABLE OILS
Coconut oil, NY 13 1/4
Coconut oil, Pacific NA
Corn oil, Midwest 17 1/2
Cottonseed oil, Valley 28
Lard, inedible, fancy, tanks, divd. NY 31
Peanut oil, Southeast (restricted) 31
Soybean oil, Decatur 14 1/4

REFD. VEGETABLE OILS
Coconut oil, L.W., NY 18 1/4
Corn, jumbo tanks 24 1/2
Cottonseed oil, jumbo tanks, NY 26 1/2
Peanut oil, jumbo tanks, NY 29
Soybean oil, NY 18 1/2

OILMEALS
Cottonseed, 14% bulk, Memphis 100
Lard, inedible, 34% bulk, Fargo 180
Peanut, 10% bulk, 22, Alabama 170
Soybean, unref., 44% bulk, Decatur 164

FATS & GREASES
Grease, white, choice, tanks, divd. NY 8 1/4
Grease, yellow maximum 10%, 1/2c. per lb. 8 1/4
Lard, loose, bulk, tanks, divd. NY 10
Tallow, inedible, fancy, tanks, divd. NY 10
Tallow, inedible, bulk, tanks, divd. NY 8 1/4

be sustained and will soon come back down. The competition of the oils market makes it unlikely that the price will stay this high, since many applications of the oil are substitutable. One brokerage source expects to see the price fall until it breaches the most recent lows, a little over 18c. per pound.

Prior to the recent heavy buying, buyers had been seen as being kept out of the corn oil market by the relatively low prices of competing oils, with little forward buying. The market had been very slow as consumers waited for the new crop to drive prices down. The supply has been described as tight, but sufficient to meet demand. Harvesting has already begun in Texas, with the main harvest expected to begin in middle to late September.

LINSEED OIL — The market for this oil has been very steady, and running at normal levels for this time of year. "It's not a very up and down thing," a source says, pointing out that the price has remained unchanged for a number of weeks.

Sources note that the ink business has not been doing as well as had been expected. Ink producers, therefore, are "a little behind" in their linseed oil orders. Many of them, however, are said to be running "roughly close" to last year's level of purchasing, sources say.

The current flax crop, concentrated in North and South Dakota, is said to be looking very good in terms of yield. No price decline in linseed oil is expected before early October when harvesting begins.

SOYBEAN OIL — Two recent government-assisted exports have helped to bolster an otherwise sagging soybean oil market. Department of Agriculture issued a \$5 million loan to Haiti under a Title III credit sales agreement of Public Law 480. Haiti then pur-

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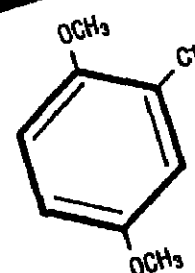
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Chemical Finance

Wickes Company Pursuing Owens-Corning

Wickes Companies, a Santa Monica, Calif.-based diversified company, has made an unsolicited offer to purchase Owens-Corning Fiberglass Corporation for \$70 per share, or about \$2.10 billion. Owens-Corning said that it would review the offer but indicated a negative response by saying that a broad restructuring would be among numerous alternatives to be considered. Restructuring is a critical and almost always successful method of defense, if carried far enough.

Agra Acquires Biological Consultants Inc.

Agra Industries, Ltd., Toronto, Canada, has acquired Biological Consultants Inc., of Birmingham, Ala., a consultant in the application of biological organisms to treat municipal, agricultural, industrial and toxic wastes. R.W. Norcross Jr. will continue as president of the company.

Int'l Technology Goes on Pacific Exchange

International Technology Company, of Torrance, Calif., has been listed on the Pacific Stock Exchange in San Francisco under the symbol "ITX." The company provides services for the assessment, mitigation and decontamination of situations involving hazardous substances. Revenues in the fiscal year ended March 31, 1986 were \$207 million, up 34 percent from the previous year.

Rollins Acquires Environmental Control Technology

Rollins Environmental Services Inc., Wilmington, Del., has acquired the business and certain assets of Environmental Control Technology Corporation, Ann Arbor, Mich., for 20,161 shares of Rollins common stock. The acquired company will provide analytical services for Rollins' three hazardous waste incineration facilities.

Waste Management May Offer Equity in Two Units

Waste Management Incorporated, the largest chemical waste handler, is weighing the public offering of up to 20 percent of the equity in its chemical and nuclear waste businesses. The Oak Brook, Ill.-based company said that stockholders may realize greater values if these businesses are conducted in a separate publicly owned entity.

Reichhold's Ester Unit Going to Denka

Reichhold Chemicals Inc., White Plains, N.Y., has signed a letter of intent to sell its US specialty ester business to Denka Chemical Corporation, of Houston, Tex., in a cash transaction. Price was not disclosed. The transaction is expected to be completed within 90 days.

The agreement includes a manufacturing plant in Carteret, N.J., the "Staflex" and "Barca" trademarks, along with licenses and technology. The product line comprises phthalates and adipates and other plasticizers, which Reichhold itself will continue to market through subsidiaries in Switzerland and Austria.

Greenwell Reinstates BOC, Brent Ratings

Greenwell Montagu Research Company in the UK has reinstated its "buy" recommendation on British Oxygen Company following a long period of weakness in the shares, and is again recommending purchase of the shares of Brent Chemicals Ltd., now that the price has drifted to a level below its intrinsic value. (Greenwell is rating shares of Coalite PLC as a "hold" and Coates Brothers is called a "speculative buy." Imperial Chemical Industries PLC also is recommended.

SDS Biotech Completes TechAmerica Offer

SDS Biotech Corporation, a wholly-owned subsidiary of Fermenta AB, of Stockholm, Sweden, has successfully completed its tender offer for 4.36 million shares or approximately 51 percent of the 8.5 million outstanding shares of TechAmerica Group Inc., at \$4 per share. Some 5,887,345 shares were tendered. SDS Biotech, based in Painesville, Ohio, is a manufacturer of agricultural chemicals and various animal health products.

Uniroyal, Goodrich Merge Tire Lines

B.F. Goodrich Company and Uniroyal Inc. have completed the merger of their tire businesses with the formation of Uniroyal Goodrich Tire Company, based in Akron, Ohio, with annual sales of about \$2 billion.

Hutton Likes Outlook for Hercules Incorporated

John P. Henry, chemical analyst at E.F. Hutton & Co., is rating the shares of Hercules Incorporated for "aggressive purchase" by short-term investors and "accumulate" for long-term investors. Hutton expects Hercules to earn \$3.75 per share this year and \$4.50 in 1987, up from \$2.40 per share last year. Hercules' strong prospects are enhanced by upcoming joint venture for water soluble products with Henkel AG, of West Germany.

Oppenheimer Likes Koppers and Chemed Stocks

Koppers Company should earn \$2 per share this year and \$3 next year, following a forecast of \$3.75 per share in 1985, according to a report from Oppenheimer & Co. Oppenheimer chemical analyst, Charles J. Rose, is keeping Koppers on his special research recommended list, and is also recommending the shares of Chemed Corporation. Chemed should earn \$2.30 this year and \$2.75 next year, versus \$2.21 per share in 1985. Rose has reduced his forecast for Nalco Company to \$1.60 per share this year, versus \$1.75, and he sees only \$1.75 per share next year, versus \$1.87 in 1985.

Dow Chemical to Boost Share in Magma Power

Magma Power Company, Los Angeles-based geothermal energy developer, has announced that Dow Chemical Company has declared its intention to take as Magma Power stock about \$400 million in accrued contractual fees due to Dow. When the transaction will enlarge Dow's holdings in Magma Power to almost 35 percent. Dow exercises additional options it holds in the future, the stake could rise to 40 percent. Before the latest action, Dow's Magma Power interest totaled 25 percent.

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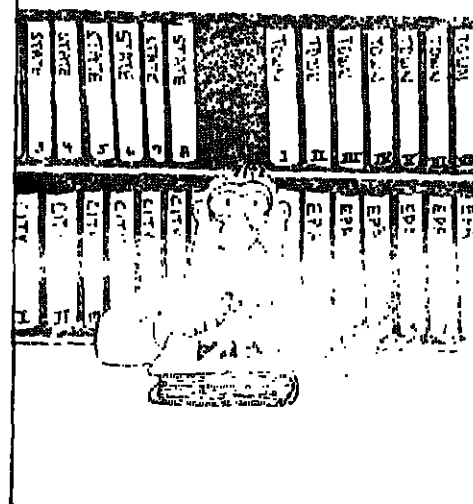
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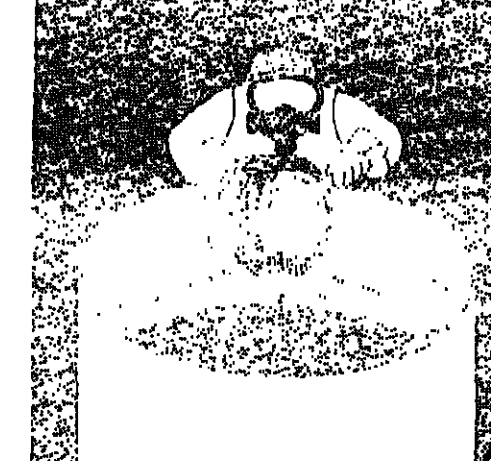
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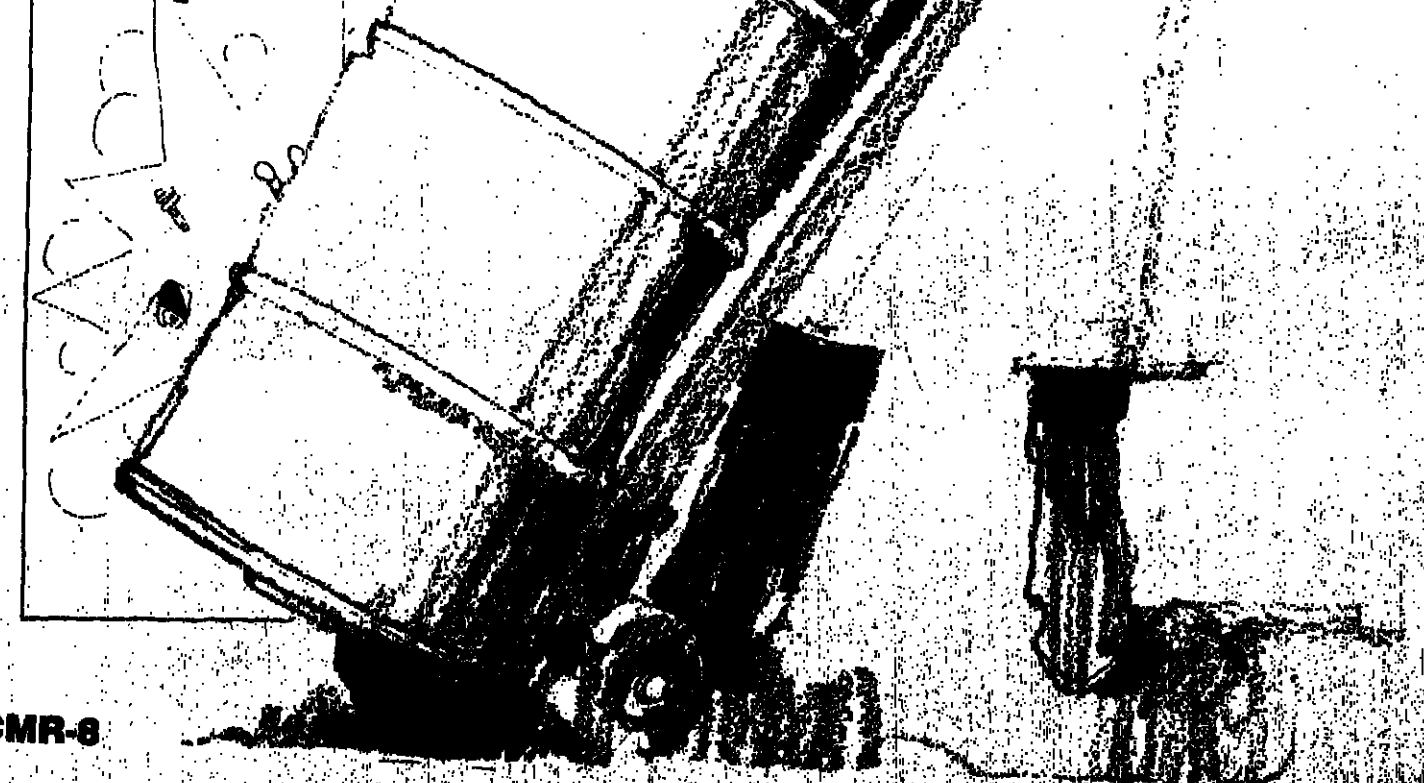
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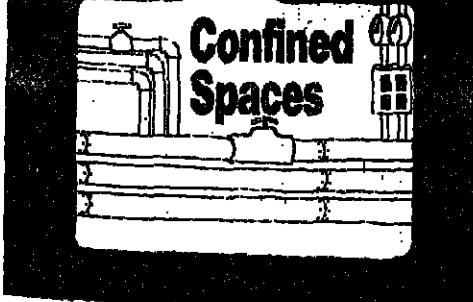


Explosion

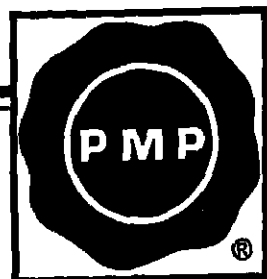


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ALIPHATIC ORGANICS VAM Pricing Could Firm Up As a Result of OPEC Move

Producers of vinyl acetate monomer say prices for the material have slipped somewhat since January 1, but at least one maker looks to the possible cut in OPEC oil production as a sign of a better pricing climate to come.

Last week, producers offered several perspectives on where pricing currently stands in the industry. Two makers said that 28 cents to 30 cents per pound, delivered, is roughly what an average, medium-sized account is currently paying. Another producer maintains that most material is moving at 25 cents to 27 cents per pound.

Producers were unanimous, however, in questioning the validity of a 21-cent price, f.o.b. Texas that has recently been reported. One maker says that that price, if available, would only be quoted to the very largest accounts, perhaps those taking in excess of 50 million pounds, and is not representative of the market.

Another maker emphasizes that the 21-cent price is f.o.b. rather than delivered, and customers paying this price would probably provide their own transportation.

PRICES HAVE DECLINED

In any event, prices have come down since January, by 1½ cents, according to one supplier, and by as much as 3 cents according to another.

Not surprisingly, the plunge in crude oil prices is at the heart of price weakness in VAM, according to producers. "I'm sure that supply and demand play a role," says one, "but the major reason is hydrocarbons."

He tells the by now familiar story of chemical makers who must contend with customer reaction to pricing at the gas pump and the resultant pressure on the prices of all crude derivatives.

Apart from the crude oil situation and a VAM oversupply, it's asserted that one producer may be contributing to price weakness by concentrating more on moving captive raw materials output than on obtaining acceptable prices for finished VAM production. The assertion is denied.

Softening methanol prices also play a role, according to a marketer. "Certainly methanol has taken a dive," he asserts. At the beginning of the year, methanol was reported selling at about 38 cents per pound (CMI, 2/3/88, pg. 17). Methanol was reported selling for approximately 30 cents per pound in July.

Overcapacity is an issue of some dispute among domestic makers. One supplier calls VAM "a commodity with tremendous world-

wide oversupply," and continues that "there is more than adequate supply in the US because there has been a big export market." He asserts that the export market can be "as much as 600 million pounds," and likens this market to "the output of one large plant."

That becomes significant if exports decline and exporters are left looking for a place to put their product. The producer says the export market is currently seeing a price decline similar to that in the US market, and he suggests that "currently, everyone is concentrating on the US market."

"Some people who typically export VAM are trying to move product in the US," says a competitor, but he discounts the overall ef-

PRICES TRENDLINES

WEEK ENDING AUG. 8, 1988

CHANGES/UP

None

CHANGES/DOWN

None

ALIPHATICS INDEX

The Aliphatic Organics index reflects the prices of 20 representative materials in this sector and the quantity of each produced in 1985.

Aug. 8, 1988	222.80
July 31, 1988	222.80
July 11, 1988	222.80
Aug. 9, 1985	203.50

Chemical Prices Start on Page 32

fect of this trend. "We have seen some material," he continues, "but whatever problems that will cause have already been seen."

Another supplier says that excess VAM capacity is not really the central issue right now. Rather, he says, the limiting factor in the market is acetic acid capacity.

"There has been overcapacity for VAM for the last few years," he acknowledges, but he also points out that "acetic acid used to make VAM is running full out industry-wide." He asserts that "all VAM producers that produce acetic acid are running their acid capacity as hard as they can."

Thus, he concludes that "people aren't cutting VAM pricing to use more capacity."

A competitor feels that a strengthening may be close at hand for VAM, based on signs that OPEC will finally take action to shore up sagging oil markets. "Fundamentally it's the crude oil situation that is responsible for

ALIPHATIC ORGANIC EXPORTS: JUNE

BUREAU OF CENSUS FIGURES IN POUNDS ON THE KEY ALIPHATICS

	QUANTITY	JUNE	VALUE	QUANTITY	MAY	VALUE
Acetic Acid	4,424,080	895,832	11,820,118	4,188,200	8,182,000	10,518,000
Acetone	3,969,612	954,110	7,345,604	3,745,604	7,345,604	7,345,604
Acrylonitrile	98,520,388	26,229,389	74,390,754	91,003,000	24,390,754	71,003,000
Adipic Acid	5,782,611	2,548,862	9,268,388	5,268,388	2,268,388	8,268,388
Butadiene	21,320,580	4,895,367	12,429,504	20,429,504	4,429,504	11,429,504
Butanol	5,125,775	1,684,571	6,183,082	4,183,082	1,183,082	5,183,082
Butyl Acetate	3,878,220	1,041,182	7,423,101	3,423,101	941,182	6,423,101
Caprolactam	1,375,987	745,676	2,716,171	1,216,171	616,171	2,216,171
Chlorinated Hydrocarbons	9,191,298	1,785,481	15,488,135	8,488,135	1,488,135	14,488,135
Ethanolamines	18,143,358	5,257,669	12,429,679	17,429,679	5,029,679	11,429,679
Ethyl Acrylate	6,124,713	2,404,542	5,888,888	5,888,888	2,088,888	5,088,888
Ethyl Alcohol	53,877	109,236	120,132	53,208,198	106,416	116,416
Ethylene Dichloride	15,898,513	803,847	58,208,198	15,208,198	782,517	57,208,198
Ethylene Glycol	44,967,851	7,421,572	80,376,517	44,376,517	7,376,517	79,376,517
Formaldehyde	1,904,617	300,632	1,885,724	1,885,724	285,724	1,585,724
Glycoline (Crude)	391,418	155,325	290,229	390,229	150,229	280,229
Glycerine (Refined)	386,097	285,009	599,138	385,009	280,138	589,138
Glycol	3,154,589	1,940,195	6,448,408	3,048,408	1,848,408	6,148,408
Methanol	3,982,889	1,371,377	3,349,711	3,849,711	1,249,711	3,149,711
Methyl Ethyl Ketone	7,440,481	1,774,548	3,388,603	7,388,603	1,688,603	3,288,603
Methyl Methacrylate	6,304,106	2,512,121	12,010,892	6,010,892	2,410,892	11,510,892
Methylene Chloride	2,584,882	583,008	5,440,735	2,440,735	563,008	5,140,735
Paraldehyde	1,871,053	414,595	860,432	1,860,432	404,595	850,432
Polyethylene Glycol	680,183	1,591,857	26,891,857	670,183	1,541,857	26,391,857
Propylene Glycol	205,583,065	4,920,595	19,815,477	198,583,065	4,820,595	19,315,477
Propylene Glycol	6,325,888	1,775,208	8,821,408	6,225,888	1,725,208	8,721,408
Triethyleneglycol	4,719,072	1,784,208	20,409,133	4,619,072	1,734,208	19,909,133
Trichloroethylene	1,027,882	400,548	8,070,548	1,017,882	390,548	7,970,548
Vinyl Acetate	35,758,520	8,371,581	14,241,581	35,258,520	8,271,581	14,141,581
Vinyl Chloride	99,502,741	10,404,848	14,241,581	99,002,741	10,304,848	14,141,581

ALIPHATICS

current psychology," he says.

He suggests that a change in the current weak oil market, which could be produced by an OPEC agreement to cut production, could reverse that psychology.

A potential result could be firming in all derivatives markets, including VAM. "I think the OPEC settlement, at least on a temporary basis, plus the acetic production picture, could lead to a firming." In any event, he says that price decreases have halted for the moment.

The VAM industry is basically mature, producers say. Domestic demand totalled 2.1 billion pounds in 1985 and is projected to grow to about 2.3 billion pounds during 1986. Producers say they expect to see demand growth of between 1 and 2 percent per year over the next three to five years.

GLYCERINE — Production of crude glycerine, including synthetic, totalled 23.1 million pounds in June, according to Department of Commerce. That represents a 1.7-million-pound decline from the production level seen in June of 1985, and a 5.6 million pound decline from May 1986.

Producers' stocks of crude and refined glycerine stood at 40 million pounds at the end of June, Commerce says. Stocks at the end of June were up 2.2 million pounds from end-of-May levels, and up 15.4 million pounds from levels seen in June of 1985.

Glycerine imports amounted to 2.8 million pounds in June, compared to 4.1 million pounds during the previous month, and 5.3 million pounds in June of 1985.

As of the end of June, cumulative imports stand at 28.9 million pounds, compared to 19.8 million pounds during the same period in 1985.

At 800,000 pounds, exports in June were unchanged from the level of the previous month, but were down sharply from the June 1985 total of 3.6 million pounds. Cumulative exports, through June, stand at 8.6 million pounds, just over half of last year's total for the same period.

Total domestic disappearance of glycerine was 22.9 million pounds, down from the May total of 28.3 million pounds, but above the June 1985 figure of 21.7 million pounds. Year-to-date domestic disappearance amounts to 174.5 million pounds as of June.

'Green Book' Advertisers

Advertisers in the OPD CHEMICAL BUYERS DIRECTORY ("Green Book"), sister publication of CHEMICAL MARKETING REPORTER, advise us that they are being solicited by Associated Business Directories of Winter Springs, FL, to advertise in that concern's Commercial Chemical Directory for 1987.

Accompanying its invoice-like statement, which the company insists is not a bill, is a tear sheet of the advertiser's insertion in the 1986 edition of the OPD CHEMICAL BUYERS DIRECTORY.

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Celanese Set to Sell Methanol to California

Celanese Chemical Company has signed "a letter of understanding" with Applied Cogeneration to sell fuel methanol to Applied Cogeneration, which in turn will resell the methanol to industrial and transportation consumers in Southern California.

Applied Cogeneration says it will focus its marketing activities on converting stationary industrial boilers and turbines, fired-process equipment and certain transportation sources to allow them to burn fuel-grade methanol. A company official says concern over pollution in Southern California provides a "huge" market potential for clean burning alcohol in industrial power systems.

Applied Cogeneration is a 50-50 partnership between Applied Western Systems, Inc. and Lionheart Resources Corporation, of Vancouver, B.C.

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AROMATICS

Continued from Page 13

serious than that would indicate, since Union is said not to have attempted to obtain supplies from other producers.

Chevron Chemical, which said on January 1 that it was leaving the business, says it has since "seen a little more healthy environment" this year with Du Pont's shutdown and the elimination of half the industry's 4c. per gallon price discount.

Consequently, the company's 38-million-gallon-per-year Port Arthur, Tex., plant, which had been running only "off and on (for) a couple contract customers we were obliged to continue supplying," has recently been running closer to capacity.

With the 5c. per gallon benzene contract decrease, cyclohexane pricing falls 4.1225c. per gallon in accordance with the industry-wide pricing formula. The new prices range from Phillips Chemical Company's 85.40c.-per-gallon price to Texaco Chemical Company's 84.40c.-per-gallon price.

DMT — Although feedstock paraxylene prices have held steady, dimethyl terephthal-

ate pricing has dropped 1c. per pound in the past three months, to 23 1/4c. per pound from 24 1/4c. per pound.

Producers say the lower price is a result of reduced energy costs and weak demand from the polyester fiber industry, which accounts for about 75 percent of DMT consumption. While a negative growth rate is expected this year for shipments to the polyester fiber market, producers are optimistic about demand from other sectors.

The PET container market "is booming these days," remarks one producer, and another projects a growth rate of 10 to 15 percent this year. Demand from film, engineering, and specialty resin markets is said to be growing modestly.

"The fiber area is much more mature" than these others, comments one producer. Since most material for fiber use is supplied internally, he says, the healthy growth rate in non-fiber DMT demand has led to a noticeable increase in the size of the merchant market.

Eastman Chemical, considered a "small player" in the merchant market by other producers prior to its withdrawal from contractual business in the first quarter, says that it intends to supply the spot market if it

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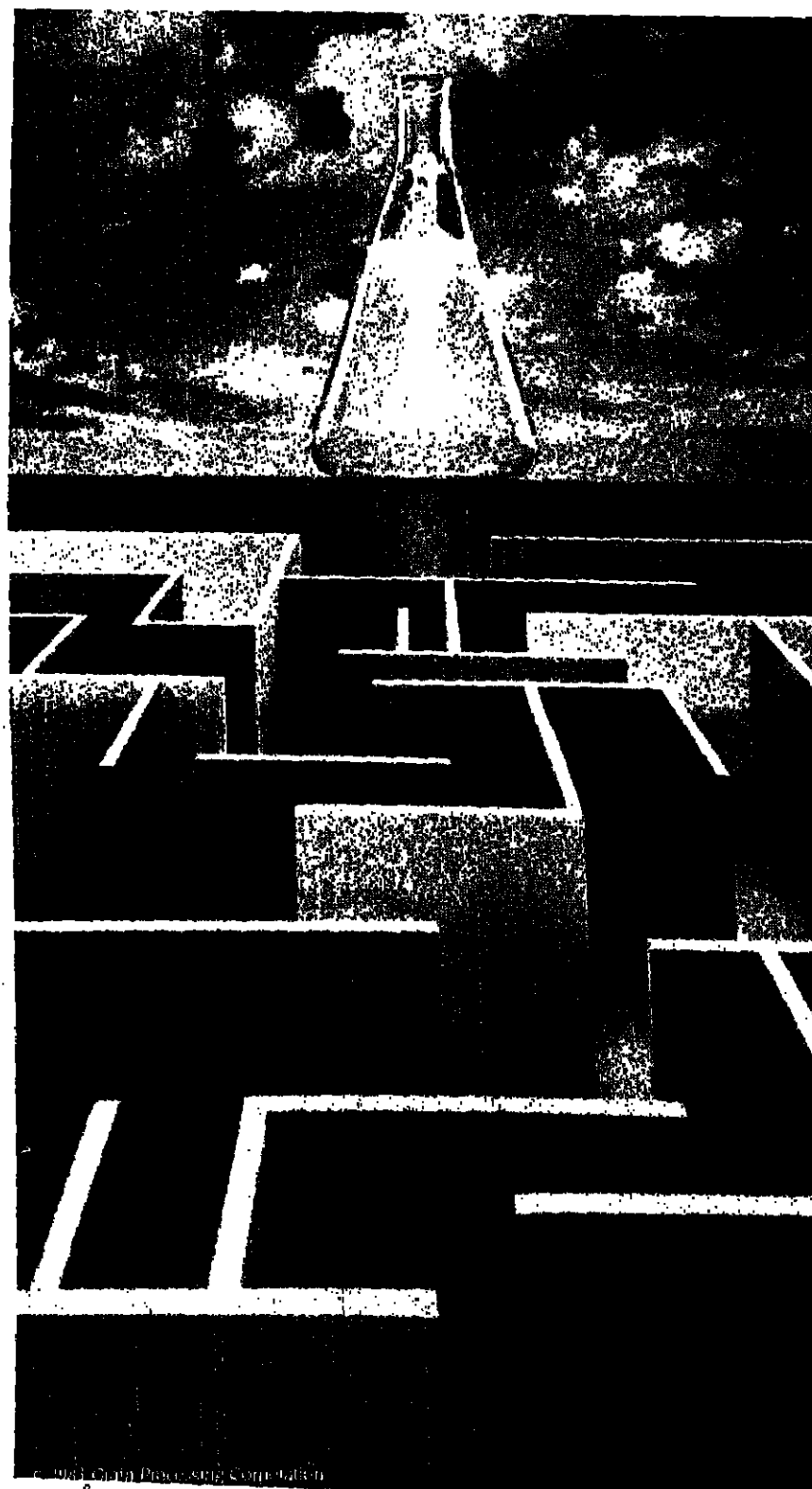
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down, the company source says. Customers eventually were successful in persuading Crown Zellerbach to start up again. The current price of \$3.55 per pound for shipments over 350 pounds is said to be slightly above the 1985 level.

The main use for thiophenol is reportedly as a larvicide intermediate. The company says that other uses are in dye manufacturing and wood preservation, and that potential end markets being looked at include adhesives, fire retardant plastics, and thermoplastic resins.

Industrial Biocides

Continued from Page 4

nies develop responses to "data-call-in notices" for more than 700 biocidal chemicals registered in California. The California Department of Food and Agriculture issued the notices last January, in accordance with the state's Birth Defects Prevention Act of 1984.

The notices require registrants to submit data on certain toxic, oncogenic and reproductive effects of the registered pesticides. Companies that do not have the data must initiate studies and submit reports by specified dates. CMA estimates that costs for developing the required data could be \$1.54 million per chemical.

Currently, the panel is also focusing its efforts on reauthorization of the Federal Insecticide, Fungicide, and Rodenticide Act, providing input in the development of EPA's upcoming anti-microbial testing requirements, and preparing to address upcoming state and Federal data requirements for "active" substances used in the manufacture of pesticides.

BASF Plans Sale Of Colorants Unit

Polychrome Chemicals Corporation, Bloomfield, N.J., says it is in the process of negotiating a definitive agreement with BASF Corporation for the acquisition of most of the assets of the RBH Industrial Colorants business in Bound Brook, N.J.

On completion of the purchase, Polychrome intends to operate RBH in generally the same manner as in the past. Polychrome Chemicals operates two other facilities in New Jersey and two in Illinois, all serving the coatings industry.

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DRUGS & FINE CHEMICALS

Guar Gum Supplies Plunge; Oil Services Industry Drops

As predicted, guar gum supplies have dwindled this year. Spokesmen agree that catastrophic conditions were prevented only by a diminishing requirement within the depressed oil services industry.

Last Fall's guar crops in India and Pakistan, the world's leading sources, were poor because of unfavorable weather. Guar import statistics for 1986 reflect this. Through May, 29.3 million pounds of guar had entered the US, about 45 percent less than the 53.7 pounds which came here through May 1985.

The US imports almost all of its guar requirement. While it is common for companies to build their inventories, most spokesmen agree that virtually all 1986 imports are being sold immediately.

In a typical year, claim spokesmen, present supplies would fall far short of demand. However, the oil services industry, which uses about half the guar sold in the US, is buying on a hand-to-mouth basis because of declining activity and plunging oil prices. According to Hughes Tool Company, 721 rigs were active last week. Although the number of active rigs has slightly risen in each of the last three weeks, the total is far below the 1,995 active rigs at the end of December. Moreover, the active rig total only began to rise after reaching an all-time low of 663 on July 14.

OIL BUSINESS DECLINES

Therefore, "tightness is not a major problem (because) the oil business has fallen off significantly." Says a spokesman, "Any shortages in the crop were almost negated because the oil volume wasn't there."

Other markets for guar, such as the textile, food and paper markets, are flat, say spokesmen. Currently, Federal measures are being considered to aid the faltering US textile industry, although these measures are opposed by the Reagan Administration. Even if measures are taken, says one spokesman, the guar industry probably wouldn't benefit much. "It could possibly help, but not to a major extent," he says.

Because of low demand overall, customers are obtaining material. However, notes one spokesman, the market is "sensitive, delicate. There's just enough to take care of all needs."

Now the industry awaits the next crop. Industry spokesmen are hesitant to speculate so soon (the height of the season is in September and October), but some claim that preliminary signs are not encouraging. While it's the monsoon rains of September and October which help the crop flourish, rain is needed now to help the seeds germinate, and some spokesmen indicate that these rains are late. They should be coming now, or have even slightly passed. Another spokesman sus-

pects that "the rain hasn't been that good." Others, though, say there is no reason to expect a poor crop.

One spokesman claims that the price of "split" or raw material, is often an accurate indicator of what is in store for the industry. He claims that when the price of splits comes down, the rainfall has been adequate. Conversely, the price rises when rainfall is not adequate. If the price remains steady, he says, that means the situation is "spotty" and could go either way. Currently, split prices are steady which, according to this spokes-

PRICES TRENDLINES

WEEK ENDING AUG. 8, 1986

CHANGES/UP

None

CHANGES/DOWN

None

DRUGS INDEX

The Drugs & Fine Chemicals index reflects the prices of 10 representative materials in this sector and the quantity of each produced in 1985.

Aug. 8, 1986 211.16
Aug. 1, 1986 211.16
July 11, 1986 211.16
Aug. 7, 1985 211.16

Chemical Prices Start on Page 32

man, indicates potential difficulties. He concludes that "if we get a second (consecutive) bad crop, it's going to be tough."

Split prices are quoted at less than \$1,000 per metric ton by several spokesmen, with one saying the price is closer to \$900. Prices for the various grades of guar gum range from 50 cents to \$1 per pound, with many observers narrowing the range to between 50 and 75 cents per pound. These prices usually vary widely, and depend on quality and quantity. Prices have fallen slightly since the beginning of 1986, but are still above last year's levels. Guar gum prices doubled when it became apparent supplies would be tight. At the time, say trade sources, it was not expected that the oil services industry would be so depressed, and companies worried about meeting demand. Spokesmen say that if the next crop does turn out to be good, prices should soften more.

Current US consumption of guar gum is estimated between 100 million and 120 million pounds. Two spokesmen speculate that about 80 percent of the raw material is processed overseas, with the rest processed in the US.

IVERMECTIN — Merck & Co.'s MSD

DRUG & FINE CHEMICAL EXPORTS: JUNE

BUREAU OF CENSUS FIGURES ON THE KEY DRUGS:

	QUANTITY	VALUE	QUANTITY	VALUE
Antibiotics:				
Ampicillin and salts, bulk.....	17,781	1,346,759	110,108	1,201,363.9
Erythromycin.....	48,986	5,928,361	48,233	7,237,897.4
Penicillin HSPF.....	3,767,087	4,888,212	114,221	3,876,864.9
Penicillin, G Salts, Bulk.....	1,070,053	826,447	1,263,981	813,823.1
Tetracycline.....	1,896	2,881,239	11,918	6,946,771.1
Aspirin.....	312,878	583,464	182,771	251,611.3
Caffeine and deriv.....	76,444	129,613	13,181	46,440.8
Citric acid.....	880,048	886,722	440,986	476,714.6
Cytoplasmic salts and deriv.....	1,188	167,689	4,469	314,882.1
Hormones:				
Corticosteroids, nsp.....	4,888	6,762,758	6,460	6,669,808.7
Nonsteroid hormones.....	4,896	666,289	2,941	1,616,987.1
Prednisolone and esters salts.....	4,219	4,716,827	4,250	6,405,058.5
Steroid hormones and synthetic.....	18,425	3,432,705	81,841	4,886,496.6
Sulfonamides, bulk.....	100,038	1,407,676	96,589	646,904.7
Vitamins:				
Ascorbic Acid.....	116,808	888,636	108,782	427,386.1
Vitamin A and Pro-vitamin A, bulk.....	104,128	196,686	88,994	70,907.7
Vitamin B (thiamine).....	5,225	14,239	14,866	126,302.3
Vitamin E.....	3,088	34,571	3,228	23,124.8
Vitamin K.....	74,843	762,135	81,345	280,992.1
D and D1 panthothonic acid.....	250	3,249	4,410	27,420.4
Niacin and niacinamide.....	25,534	75,485	45,180	106,471.9
Vitamins, nsp.....	180,965	616,536	180,652	374,165.7

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GALLARD/SCHLESINGER

DRUGS & FINE CHEMS

Agvet division has received Food & Drug Administration approval for the first product to control both the internal and external parasites of swine, the company says.

"Ivomec," an ivermectin-based injection for swine, is the only product to control roundworms and lungworms by means of injection, while also controlling external parasites like lice and mange mites.

Previously, according to a Merck spokesman, animals had to be dipped into or sprayed with two products, one for internal control and the other for external control. Merck already has patents for ivermectin-based injections for cattle and horses in the US, and also has approval overseas for treating sheep and external parasites of swine.

FDA's approval was given July 22, and Merck's spokesman says the injection is now beginning to be marketed. The product's price will average 80c. per cc, which Merck's spokesman says is less than the cost of using two different products to do the same thing. He adds that injections allow for precise doses based on the animal's weight, and also subject the animals to less stress than they would be by being sprayed and/or dipped.

PHENYLPROPANOLAMINE — The American Medical Association recently adopted a report recommending a delay in formulating guidelines for the use of PPA in diet preparations. AMA says this will be its policy until additional studies requested by the Food & Drug Administration are completed. AMA's report says that when the studies are completed, the Tentative Final Monograph (TFM) will be published in the Federal Register and the AMA can develop guidelines then.

FDA's decision regarding PPA, due a few months ago, is still pending. A spokesman says no target date has been set.

Meanwhile, price is said to be stable, with lists in the high \$20-per-kilogram region. Actual selling prices are said to be lower, depending on the quality of the product.

SODIUM ALGINATE — There continues to be an oversupply of sodium alginate.

Most of the US requirement is supplied by Merck & Company, the only domestic source. However, much of the product is imported, and the rate of imports is increasing. Through June, 2.5 million pounds of sodium alginate have come to the US, compared to 2.18 million pounds for the comparable period in 1985. Leading exporters to the US are England, Canada, Norway and France.

Demand is called steady. Prices range from \$8 to \$6.75 per pound for NF grade, \$3 to \$5 per pound for FCC grade and \$1.85 to \$3.50 per pound for technical grade.

Firms to Fight US Textile Policy

The House voted to back President Reagan's trade policies last week, sustaining his veto of a bill that would protect the textile industry from foreign imports and require the administration to seek limitations on worldwide copper production.

The vote was 276-149, eight votes short of the two-thirds majority needed to override the veto. President Reagan has vetoed 47 measures and only five have been overridden by both the House and Senate.

The outcome signals the end for the controversial bill that the domestic textile industry said was needed to save it from surging import levels. The administration said the legislation would trigger retaliation by America's trading partners.

John N. Gregg, chairman of Avtex Fibers and leader of an industrial coalition that supported the bill, said fiber producers will continue to fight imports.

"America's fiber, textile, and apparel industry and its two million workers have lost the battle, but not the war, against unfair trade. As long as there's a US Congress empowered to stop the flood of unfair imports, we'll fight to gain its support," said Mr. Gregg.

The bill would have rolled back textile and apparel imports from the three largest exporters — Taiwan, Hong Kong and South Korea — and frozen imports from nine other nations, most of them in the Pacific Rim.

It also would have directed the President to negotiate voluntary production restraint agreements with the major foreign copper producers in order to limit worldwide output over the next five years. Restraint agreements with Chile, Zambia, Zaire, Peru and Canada likely would have required these countries to reduce their current production by 6-7 percent.

The bill was passed overwhelmingly last year — 255-161 in the House, 60-39 in the Senate — but President Reagan vetoed it in December saying it was protectionist, would invite trade retaliation and would raise consumer prices.

"This was a bad bill last year and it's a bad bill now," said Rep. John Miller, R-Wash. "It's bad for America's consumers...it's bad for America's workers...and it's bad for America's friends in the Far and Middle East."

Rep. Sam Gibbons, D-Fla., said the textile industry was the "most highly protected" in the US and maintained the industry is healthy.

White house officials and congressional supporters said recent textile-import pacts with Taiwan, South Korea and Hong Kong, along with a renegotiated multilateral fiber agreement, showed the administration was heading industry's concerns.

But supporters of the override, including many Southern Republicans, said the surge in imports over recent years had cost thousands of jobs in the textile industry and was evidence of a flawed trade policy. They said the new agreements would not help the industry.

ChemClear Wins \$1.3MM Contracts

ChemClear, Inc., Wayne, Pa., says it has received more than \$1.3 million in waste treatment contracts in the first seven months of its diversification into field service operations.

The company, which operates four waste treatment facilities in the Northeast and Midwest, expanded its field activities in January to service industries requiring mobile crews for commercial waste cleanup of lagoons, contaminated tanks and drum storage areas.

Carl Cording, ChemClear's president, says the expanded field service operation has grown continuously since its inception, with July accounting for almost one-third of sales since the beginning of the year. "July has been a breakthrough month for this division," he says. "It is impossible to predict the actual impact field service operations will have on our total revenues, but I see it as a significant factor in 1986 and beyond," he adds.

Superfund Tax Seen Unfair

Continued from Page 5

aware," Mr. DiBona said in a letter to the secretary.

"Given your opposition to broad-based taxes, the effect of your letter is to leave crude oil and feedstock taxes as the only source of funding," the API executive wrote.

"There can be little doubt that many in Congress will use your letter to claim the administration supports increased feedstock and crude oil taxes as the only viable option," Mr. DiBona added.

API and Chemical Manufacturers Association have jointly recommended that general revenues be used to finance the bulk of hazardous waste site cleanup. Because Environmental Protection Agency has identified more than 6,000 potentially responsible dumpsites from nearly every industry, the trade groups say the only appropriate alternative to general revenues is some other form of broad-based tax.

Although the tax issue is the only remaining unresolved matter in the nearly two-year superfund reauthorization debate, Capitol Hill observers say quick action by the tax conferees is unlikely. With Sen. Packwood and House Ways and Means Committee Chairman Daniel Rostenkowski (D-Ill.), tied up with tax reform, action on superfund will likely have to wait until Congress returns from its Summer recess, they say.

EPA administrator Lee M. Thomas says the agency needs funds by Sept. 1 or he will have to notify contractors that they would be laid off in 30 days. Already some contractors, which carry on much of the cleanup program's work, are laying off employees because of the low level of activity, he says.

Rep. John Dingell (D-Mich.), chairman of the superfund conference committee, says interim funding through appropriations, to be paid back later through superfund taxes, is "a possibility, not a probability."

Congress approved an emergency appropriation of \$150 million for superfund May 30, but EPA has nearly depleted those funds. Because Congress failed to complete the reauthorization before taxes to support the cleanup program expired Sept. 30, 1985, EPA has delayed work at more than 200 sites across the country.

Industry, environmentalists and EPA have

all expressed general support for the non-tax provisions of the new superfund bill agreed to by conferees on July 31.

"We felt all along there was material for a compromise," says a CMA spokesman. "We're glad the bill is moving again because the program has been nearly dead for almost a year."

Whether the chemical industry supports the bill, he adds, depends on how the all-important tax question is resolved. "The pressure is on to get a good broad-based tax to pay for this," he says.

Rep. Dingell, who was accused by environmentalists of supporting a "polluters' bill" during the divisive six-month conference, called the final bill "a superb piece of legislation." He says the bill is "hard on industry but fair."

Mr. Thomas agrees that some provisions will be difficult to implement, but adds, "Overall, I think it's strong legislation, and it's a law we can administer."

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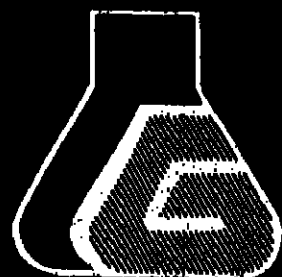
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Gas Price Fall Only Temporary

Although interstate pipelines reduced their overall cost of gas in 1985, much of the reduction resulted from temporary measures, a survey by the Interstate Natural Gas Association of America says.

The survey of INGAA member companies shows that pipelines reduced their overall cost of gas last year by 26 cents per MMBTU, an 8 percent decline from 1984.

The report says this decrease in gas costs occurred following partial wellhead decontrol on January 1, 1985, when indefinite price escalators in gas contracts were putting substantial upward pressure on wellhead prices.

The INGAA report says domestic price effects accounted for 51 percent of the 1985 price decrease and imports accounted for 37 percent. Changes in natural gas purchase patterns accounted for an additional 12 percent of the total price decrease.

The report notes that a full one-third of the reported changes were due to temporary contract renegotiation and temporary release of gas, measures "averting the immediate effects of contract problems but not solving the problems."

INGAA's policy analysis department says in the report that "with imports accounting for a disproportionate share of the 1985 price reduction and one-third of the price changes resulting from stopgap measures, much of the market distortions and rigid gas purchase contracts remained at year-end 1985."

The report concludes that "although pipelines made some progress in controlling purchased gas costs, more contract renegotiation with producers is needed. The contract problems of 1985 were apparently only postponed, not eliminated."

Pesticide Reform

Continued from Page 7

stronger role for the states when contamination in a drinking well exceeds the guidance levels, and greater authority for EPA in the event that a state fails to act to ensure that

contamination is reduced or that people do not drink the tainted water.

The committee also adopted an amendment by Sen. Helms to restrict states' authority to set more stringent standards than the Federal government for certain pesticide residues on food.

The exemption, however, is limited to pesticides registered by EPA since April 1986. Sen. Helms explained that EPA has a complete data base on these chemicals, and their safety has already been proven.

The panel narrowly approved, 9-7, a motion by Sen. Richard Lugar, R-Ind., to delete provisions from the House bill requiring EPA to revoke food tolerances for pesticides whose use has been banned in the U.S. In effect, the tolerance revocation would prohibit the importation of food containing any residues of a banned pesticide.

Sen. Lugar argued that such a requirement would be viewed by exporters as "a non-tariff trade barrier" that would invite retaliation against some US-approved food chemicals.

Boots Enters

Continued from Page 3

operation. Mr. Theobald says the two sales forces make a "very good fit" because both call on the general practitioner.

Mr. Theobald says Flint provides Boots with the products, sales and profits to support the launching of new products and a sales force expansion. Flint's major product is a drug used to treat thyroid deficiency, called "Synthroid." It accounts for around 60 percent of Flint's total sales.

Boots currently has two products under development. One, a heart drug called "Flosequin," is in phase II trials in Europe and the U.S. Boots hopes to have the drug on the US market by 1990.

Another drug in the Boots pipeline is an antidepressant, which is said to be faster acting than others currently on the market.

With a strong US presence, Boots is aiming to capture a larger slice of the American market, which accounts for 28 percent of prescription drug sales worldwide, compared to the UK, which accounts for just 3 percent.

The purchase agreement between Boots and Baxter Travenol is expected to be completed in September.

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Waste Facility Sites Debated

Continued from Page 3

when it amended the Resource Conservation & Recovery Act two years ago.

Rep. Florio said the dispute between the Carbide unit and the citizen's group is evidence of the need for clear-cut EPA standards to determine where waste sites should be located.

"These regulations will go to the heart of environmental decisions now being made by states across the country," said the congressman. "It's absolutely essential that EPA issue these regulations that are aimed at ensuring that all hazardous and toxic waste facilities are not located where they will cause environmental damage."

Mr. Lower said Unison's technology for removing PCBs from electrical transformers "can achieve the highly desirable goal of eliminating the threat which 300 million pounds of PCBs may pose for the environment, now and for the future."

Through the company's technology, he said PCBs are removed from transformers and destroyed, and the transformers can continue to operate free of the risks associated with their current levels of PCBs. Risks associated with landfilling PCB transformers are avoided.

PCB REMOVAL PROCESS

In Unison's process, Mr. Lower said the original electrical fluid, typically containing 50 to 70 percent PCBs, is removed from the transformer on-site and sent directly to an EPA-permitted incinerator, where it is destroyed.

The transformer is then filled with TF-1, a proprietary interim fluid that leaches the PCB's out of the internal components of the transformer. Finally, the transformer is filled with a permanent dielectric fluid and reclassified to non-PCB status in accordance with EPA regulations.

Mr. Lower said Unison's recovery center, nearing completion in Henderson, has been designed to separate the remaining PCB's from the TF-1 fluid. These PCB's are also sent to EPA-permitted incinerators to be destroyed.

The Henderson site was chosen, he explained, because of its central geographic location between the majority of the transformers to be serviced and the three EPA-permitted incinerators.

"While the Henderson recovery center falls under TSCA (Toxic Substances Control Act) regulations, our review of RCRA indicates there are no controls imposed on RCRA-regulated storage or treatment facilities that would cause the Henderson facility

to be sited, designed or operated differently than we currently plan," Mr. Lower said.

"In short," he added, "we are convinced that the center will not have an adverse impact on its environment—either short or long term."

Mr. Lower also noted that the facility's location would comply with RCRA requirements relating to proximity to fault lines and flood plains. He said the Henderson site is above the 100-foot flood plain of the Ohio River and miles from the New Madrid geologic fault line.

Jane M. McConathy, president of a citizen's group in Henderson, called Unison's technology a "black box" and accused the company of withholding important information from the community.

"Unison will not tell us the chemicals being used in their process," she said.

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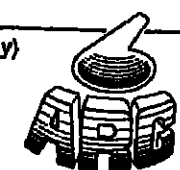
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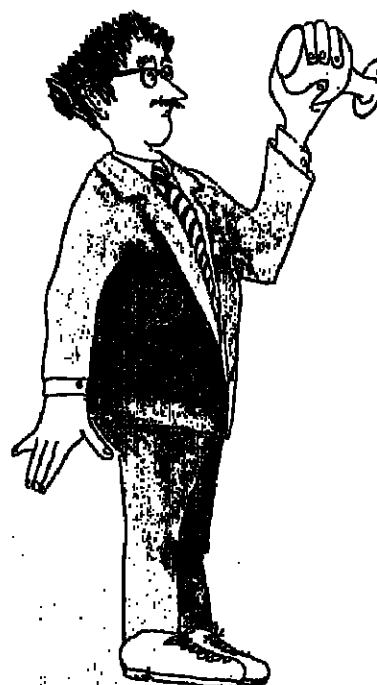
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Sunflower Oleic

Continued from Page 7

intend to sell crude oil, oleic acid and oleic acid derivatives.

Mr. Grasser says the crude sunflower oil developed by SVO Enterprises offers a higher oleic acid concentration (in excess of 80 percent) than does premium tallow (73-75 percent oleic acid concentration). He says the oil will be marketed to firms willing to pay a premium for a higher concentration of oleic acid.

In addition to challenging other natural sources of oleic acid for the high end of the market, Mr. Grasser says that high oleic acid derivatives will eventually challenge the dominance of low-priced petrochemicals in the motor oil additives market.

In this market, petroleum-based products, such as ethylene oligomers, had displaced products based on natural oils, due to the sharp decline in crude oil prices.

Mr. Grasser says that high oleic acid derived chemicals will also be sold as lubricants in strip mills, hydraulic fluids, paper sizing and other industrial applications.

While Mr. Grasser concedes that sunflower oil derivatives still cannot compete with ethylene oligomers at present, he believes the pendulum will eventually swing the other way, with petroleum-based prod-

ucts rising in price, and high oleic acid derivatives made from sunflower falling in price.

Currently, Mr. Grasser says SVO Enterprises' high oleic crude sunflower oil is priced at 50 cents per pound. However, he anticipates the price will fall next year, since the company hopes to more than double the 40 million pound crude oil output earmarked for 1986. Eventually, he projects high oleic acid crude sunflower oil production will top 100 million pounds per year.

**National Distillers
Buys Texgas Corp.**

National Distillers & Chemical Corporation last week announced the completion of its purchase of Texgas Corporation, the propane marketing subsidiary of Houston-based Union Texas Petroleum, for approximately \$185 million, \$150 million in cash and the remainder in notes payable in January, 1987.

NDCC chairman John Hoyt Stookey stated that, "The acquisition of Texgas will further strengthen NDCC's retail, industrial and wholesale propane marketing businesses operated by Suburban Propane Gas Corporation. With the addition of Texgas, Suburban Propane will market propane to approximately 1.1 million customers in 44 states."

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PERFUMES & FLAVORINGS

Grapefruit Oil Supplies Tight; Industry Awaits the New Crop

Grapefruit oil supplies are extremely tight throughout the world, especially in the US, due to what sources call a sky-rocketing demand. Because no new material will be available until Florida starts its crop in December or January, the situation is not expected to change this year.

Sources insist that the past season's crop was a good one, but just not strong enough to handle demand. "Crops weren't bad," says one broker, "demand soared.... Grapefruit oil is hard to get." Another agrees, saying that "demand is very unusual.... It's a dramatic thing."

Sources single out the beverage industry as the main reason for increased demand. Beverage demand very strong, says a broker. Another points out that consumption of beverages containing grapefruit oils is increasing.

A dealer says price for California material is about \$2.25 per pound, although he admits the market is volatile. The dealer comments that in March, prices were between \$1.25 and \$1.50 per pound, but now 75 to 80 percent of his sales are at the \$2.25 price. Florida grapefruit oil is even scarcer than the California oil, and is priced at \$2.75 per pound. One reason that Florida material is even harder to find is that Florida's season ends earlier than California's.

Folded grapefruit oil prices are also on the rise because of tightness. Last week, 5-fold Florida grapefruit oil rose to \$19.50 per pound, as did 5-fold Israeli grapefruit oil. Also, 10-fold Israeli grapefruit oil costs \$33.50 per pound. Prices are for 25-pound purchases. A broker says that now, it is often difficult, or impossible, to accommodate new customers.

Price for redistilled nootkatone is stable at \$295 per pound.

Imports are behind last year's pace through June. Thus far, 103,000 pounds of grapefruit oil have entered the US, opposed to 111,000 pounds for the same period in 1985. The leading exporters to the US are Israel and Belize. Imports from Israel are down to 56,000 pounds from 68,000 pounds, while imports from Belize have risen to 46,000 pounds, from 35,000 pounds. Small amounts are also coming here from various countries in Western Europe.

One broker mentions that Mexico is starting to provide samples of grapefruit oil, and should be entering the US market next season.

LEMN OIL — The lemon oil market is described as sluggish, and price is soft as a result.

Italian lemon oil is especially weak, and fell by \$1 per pound, to \$12.50 per pound for a 22-pound purchase. A broker says supplies are plentiful, which is one of the reasons for the decrease.

Another reason, says one source, is that

consumption figures for some beverages are down. For example, he cites the "Slice" scare in New York City recently. A person claimed to have tampered with the soft drink, causing the company to temporarily take it off the shelves. "Slice" is back on the shelves now, but the source says the incident created bad publicity for the drink.

Meanwhile, 5-fold lemon oil remains at \$48 per pound.

ORANGE OIL — Prices rose for the 20-fold orange oil, says a broker, as domestic sources face increased production costs.

Israeli 20-fold orange oil rose to \$22 per pound last week, while the 5-fold and 10-fold

PRICES TRENDLINES

WEEK ENDING AUG. 8, 1986

CHANGES/UP

Cassia, KA 3.50/4.00, 1-5c. per lb.
Cassia, KA 3.00/3.50, 7-8c. per lb.
Cassia, KB 2.25, 8c. per lb.
Cassia, KC 1.50, 4c. per lb.
Cumini Seed, Chinese, 3c. per lb.
Cumini Seed, Turkish, 4c. per lb.
Fennel Seed, Egypt, Fancy/Re-cleaned, 3c. per lb.
Fennel Seed, Turkish, Extra fancy, 4c. per lb.
Fennel Seed, Turkish, Re-cleaned, 3c. per lb.
Mace, Padang Silihu, 25-50c. per lb.
Oregano, Greek 30, Mesh, 10c. per lb.
Oregano, Turkish 30, Mesh, 22-27c. per lb.
Poppy Seed, Turkish, 4c. per lb.
Poppy Seed, Australian, 4c. per lb.
Turmeric, Peruvian, acc. qual., 1-3c. per lb.

CHANGES/DOWN

Caraway Seed, NY Re-cleaned, 4c. per lb.
Caraway Seed, Fancy/Re-cleaned, 2c. per lb.
Lemon Oil, Italian, \$1 per lb.
Mandarin Oil, Italian, \$1 per lb.
Pepper, Black Brazilian, 3c. per lb.
Pepper, Lampong, 1c. per lb.
Pepper, Malabar (August), 5c. per lb.
Pepper, Malabar (Sept.), 3c. per lb.
Pepper, Munok (August), 4c. per lb.
Pepper, Munok (Sept.), 1c. per lb.
Teagosa Oil, \$10 per lb.
Thyme Oil, FCC (Red), \$1 per lb.
Turmeric, Alleppy FAQ, 5-5.50c., 2c. per lb.
Turmeric, Alleppy FAQ, over 5c., 2c. per lb.

PERFUMES INDEX

The Perfumes & Flavorings index reflects the prices of 11 representative materials in this sector and the quantity of each supplied in 1985.

Aug. 8, 1986	71.00
Aug. 1, 1986	71.00
July 11, 1986	71.00
Aug. 7, 1985	82.44

Chemical Prices Start on Page 32.

oils were priced at \$4.75 and \$8.95 per pound, respectively. Florida's 5-fold orange oil remains at \$4.25 per pound.

Another broker comments that inexpensive low-fold material is coming to the US from Brazil, which is why other low-fold orange oils are not firming. All prices are for 25-pound quantities.

SEED & SPICE IMPORTS: APRIL

A SELECTION OF STATISTICS FROM THE BUREAU OF CENSUS.

	APRIL	MARCH	1985 TO DATE	APR. '86
Caraway seed.....lb.	821,830	823,593	2,735,140	710,307
Cassia seed.....lb.	227,577	402,841	1,698,995	240,087
Cinnamon, unground.....lb.	103,268	108,705	885,705	175,125
Cloves.....lb.	170,088	446,488	1,277,175	227,481
Coriander.....lb.	689,384	680,801	2,077,029	745,212
Cumin seed.....lb.	325,149	940,029	3,116,088	189,904
Fennel seed.....lb.	395,457	550,543	1,885,610	403,781
Ginger root.....lb.	953,891	840,571	2,451,528	6,835,579
Mustard seed, whole.....lb.	7,511,570	7,151,170	30,579,382	282,527
Nutmeg, unground.....lb.	380,898	280,300	1,507,163	522,125
Onion, whole.....lb.	624,780	825,640	3,090,750	2,948,435
Paprika.....lb.	195,503	212,946	7,375,207	2,948,435
Pepper, black, unground.....lb.	8,125,195	8,750,531	27,595,710	4,530,257
Pepper, red, capsicum.....lb.	142,945	1,457,791	385,882	188,018
Pepper, white, unground.....lb.	241,317	610,038	2,395,229	87,800
Pimento, unground.....lb.	723,713	280,595	744,914	504,516
Sage, unground.....lb.	692,888	339,392	1,188,725	190,049
Turmeric.....lb.	415,878	189,587	533,271	75,734
Vanilla beans.....lb.	305,204	271,478	531,488	75,734

COATINGS & PLASTICS

Acrylic Sheet Mart

Continued from Page 5

cations, have not been affected, sources say. USX says prices for its continuous-cast sheet run at around \$1 per square foot. Polycast, Inc. gives a price of \$1.34 per pound for cell-cast sheet.

Total US capacity for cell-cast, continuous-cast, continuously-processed and extruded acrylic sheet is said to be about 375 million pounds, roughly half of which represents cell-cast capacity. Some of this cell-cast capacity has been mothballed, and may be permanently shut down at some point in the future. Producers agree that at least 20 percent of the cell-cast capacity is excess.

In discussing demand, producers prefer to group all sheet types together, describing a total acrylic sheet market (including cell-cast, continuous-cast, continuously-processed and extruded acrylic sheet) of 315 million pounds, of which 280 million pounds is comprised of flat sheet and the remainder of prismatic formed sheet. 150 to 155 million pounds of this total is said to be composed of continuous and cell-cast sheet, with the remainder by continuously-processed and extruded sheet.

Total US capacity for molding and extrusion powder and pellet production is said to be about 250 million pounds, with 165 million pounds for molding powder and the balance for extrusion pellets.

TOTAL MARKET DEMAND

Total demand for the molding and extrusion pellets and powders is about 216 million pounds, of which 66 million pounds represents high-impact grades and 150 million pounds total merchant demand for molding powders. At least 35 million pounds of molding powders are produced for internal use by sheet producers in formulation of continuously processed sheet.

Some sources fear that planned sheet expansions will create an overcapacity problem in the molding/extrusion end of the market, with the possibility of long-term depressing effects on pricing. Since 1984 prices for these grades have remained stable.

Truckload prices for Continental Polymers molding/extrusion compounds are 91 cents per pound for "CP-51", \$1.02 for CP-923 and \$1.09 for CP-925 and \$1.24 for high-impact CP-1000. Similar prices for Rohm and Haas products are given, with 91 cents per pound for clear general-purpose grade (colored grades costing an additional 6 cents per pound) and up to \$1.27 per pound for truckload quantities of high-impact grade.

Overall growth in the molding/extrusion segment of the market has been dominated by the construction and automobile industries. Due to an increase in auto imports this segment of the acrylics market has been down by as much as 4 percent this year.

Although certain small markets for recently developed applications including

molded acrylic compounds used in medical instrumentation components such as connectors and chest-drainage units, and molded videodisk components are annually showing double-digit growth, and are expected to continue at this rate, they are overshadowed by a flat growth picture overall, producers say.

PLASTICS ADDITIVES

AZODICARBONAMIDE — The market for azodicarbonamide blowing agents has been fiercely competitive for the past two years, producers relate.

One small producer says that current selling prices range around an average of \$1.65

PRICES TRENDLINES

WEEK ENDING AUG. 8, 1986

CHANGES/UP

None

CHANGES/DOWN

None

COATINGS INDEX

The Coatings & Plastics index reflects the prices of 13 representative materials in this sector and the quantity of each produced in 1985.

Aug. 8, 1986	306.4
Aug. 1, 1986	306.4
July 11, 1986	306.4
Aug. 7, 1985	306.4

Chemical Prices Start on Page 32

per pound for the largest volume customers, a substantial discount from the listed price of \$2.60 per pound. A spokesman for the firm complains that they have been hurt by Japanese, French and Korean imports. (One Japanese firm which exports to the US gives a selling price range of \$1.40 to \$1.86 per pound, depending on grade and quantity.)

Although imports have affected larger producers as well, there is a feeling among major suppliers that the situation is stabilizing, and prices may soon be on the increase, due in part to the change in yen-to-dollar value ratio.

Overall demand has been increasing at GNP growth rate, roughly 4 percent from last year, a source relates.

One potential high-growth market is that of blowing agent compounds. Although azodicarbonamide is FDA approved, it is dusty and difficult to work with. Sources report that both Noritech and Polyvel, Inc. are offering net (azodicarbonamide compounds containing 20 to 25 percent of the agent) for use in

Continued on Page 30

COATING & PIGMENT IMPORTS: MAY

CENSUS BUREAU REPORTS ON THE TOP PAINT MATERIALS.

	MAY 1986	VALUE	QUANTITY	VALUE	QUANTITY
Antimony oxide.....lb.	2,787,089	1,794,370	2,370,311	1,893,204	
Carbon black.....lb.	5,284,948	1,922,790	10,489,001	3,083,409	
Chromium colors:					
Chromium oxide green.....lb.	226,875	230,351	574,492	539,493	
Molybdate orange.....lb.	177,500	118,684	118,480	119,578	
Yellow.....lb.	209,340	142,145	348,018	253,318	
Zinc Yellow.....lb.	166,282	98,028	280,000	144,718	
Cobalt Oxide.....lb.	19,489	165,791	118,418	1,088,021	
Cuprous Oxide.....lb.	80,000	89,578	79,889	77,482	
Iron oxides.....lb.	525,911	627,384	482,807	601,082	
Iron oxides, hydroxides, nat'l.....lb.	40,000	5,598	116,540	18,940	
Synthetic:					
Black.....lb.	141,732	35,368	116,571	55,092	
Red.....lb.	1,189,234	373,567	1,078,888	304,340	
Yellow.....lb.	2,242,616	485,502	2,885,077	548,402	
NAPF.....lb.	1,515,174	1,085,889	1,094,262	688,654	
Litharge.....lb.	1,389,618	225,788	1,885,292	272,423	
Red Lead.....lb.	89,000	17,430	17,000	16,437	
Black, bleached.....lb.	35,553	54,468	68,048	167,204	
Black, butters, other lacs.....lb.	80,563	170,222	90,792	196,871	
Seed lac.....lb.	627,616	577,132	674,480	501,287	
Titanium dioxide.....lb.	26,844,973	19,800,383	32,803,830	19,814,288	
Ultramarine blue.....lb.	437,471	431,785	585,738	576,405	
White lead, basic carbonate.....lb.	1,197	6,809	164,127	78,285	
Zinc Oxide (lead free).....lb.	338,974	119,871	7,824,456	2,258,723	

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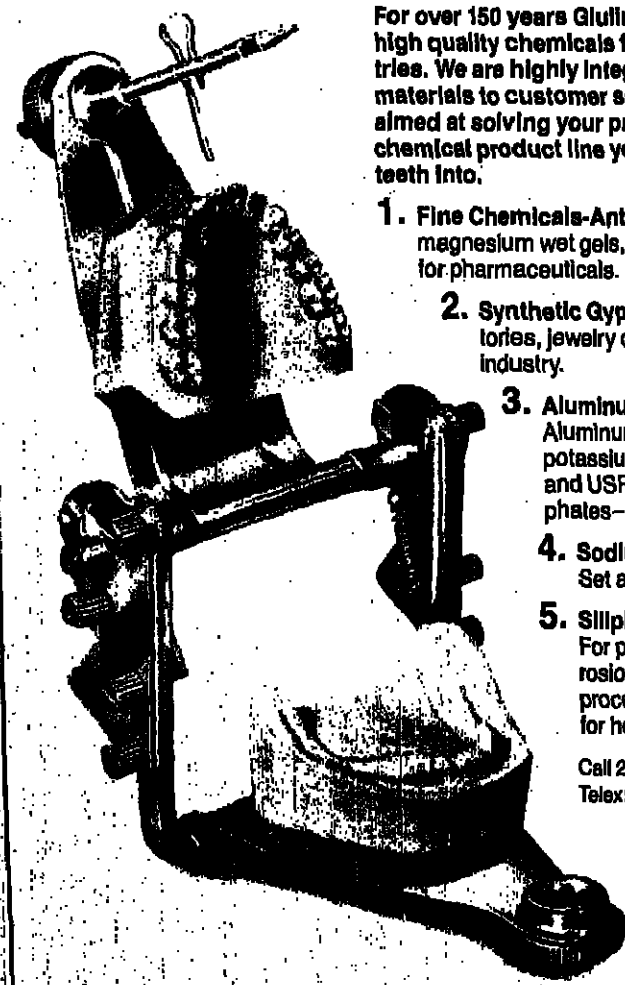


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HEAVY & AG CHEMICALS

Water Fluoridation Market Still Feeling the Supply Bind

The Center for Disease Control (CDC) said last week that water fluoridation has resumed in major cities such as Cincinnati and Philadelphia that lacked fluoridation chemicals early this Spring. All involved in the business, however, say that the tight supply situation continues, creating higher prices and some product allocation for municipalities and aluminum fluoride producers.

The main cause of tightness is generally acknowledged to be low operating rates for the phosphate fertilizer business. Hydrofluosilicic acid (HFS), the primary fluoridation chemical, is recovered as a byproduct of phosphoric acid production. In particular, sources cite the continued closure of Farmland Industries' Green Bay, Fla., phosphate fertilizer plant as tightening HFS supplies. A Farmland spokesman says a start-up date for the plant has yet to be chosen. One source feels that the date may be over a year away.

Also cited are a two or three week maintenance turnaround at Freeport Chemical, and minor production problems at Conserve's plant.

Other major HFS producers include Gardiner, Texasgulf, W.R. Grace and La Roche Industries (formerly USS Agrichemicals). Not all phosphate producers recover HFS.

SSF IN TIGHT SUPPLY

Also in short supply is sodium silicofluoride (SSF), which is produced from HFS and used in the dry fluoridation systems often found in smaller cities. Producers in this business are Gardiner, Kaiser Chemicals and Chemtech Industries. According to one source, two SSF producers have left the market over the past two years, victim of the poor margins that existed prior to the present situation.

CDC says that at present, all major cities are fluoridating. A spokesman acknowledges, however, that spot shortages, especially for smaller systems, have been reported. In addition, he feels that overall the fluoridation chemical market was tighter this Summer than it was in 1982, when HFS supplies were also low.

One municipal water manager, whose city was not fluoridating four months ago, says full fluoridation has since resumed. He adds, however, that some delivery delays have been experienced.

Similarly, one buyer for an aluminum producer says material is available, but admits that his company is not able to purchase as much as it would like. The aluminum industry produces aluminum fluoride from HFS as part of its cryolite refining process.

Some fluoride chemical producers say they are currently selling on an allotment basis, one says he continues to get calls requesting spot sales that he must turn down.

Prices have risen as a result of the supply situation. Producers increased HFS prices in mid-Summer to \$140 per ton for 100 percent acid, l.o.b. plant, from \$100 per ton. Similar

SSF increases, to \$18.75 per hundredweight and \$400 per ton, soon followed.

Two weeks ago, Freeport Chemical hiked prices again, to \$190 per ton, effective September 1. Other producers say they are considering the market situation.

Producers claim that during healthy sea-

PRICES TRENDLINES

WEEK ENDING AUG. 8, 1986

CHANGES/UP

Sodium Fluorosulfate, 50% per pound

CHANGES/DOWN

None

HEAVY & AG INDEX

The Heavy & Ag Chemicals Index reflects the prices of 18 representative materials in this sector and the quantity of each produced in 1985.

Aug. 8, 1986	113.89
Aug. 1, 1986	113.89
July 11, 1986	113.89
Aug. 7, 1985	113.89

Chemical Prices Start on Page 32

sons for phosphate fertilizers HFS supplies are much looser and prices are poor. When high and low price periods are averaged out, they say, overall returns are only moderate. Prices to municipal users vary and are generally higher than producer prices, sources report, since most HFS and SSF go through distributors first.

Prices to aluminum fluoride makers, however, are generally lower, reflecting long term contract arrangements and the acknowledgement on the part of HFS producers that the aluminum industry is depressed.

CDC sponsored a meeting in June to discuss averting fluoride chemical shortages in the future. Among other things, CDC recommended the installation of storage equipment by consuming municipalities. Based on the observation of the effects of previous shortages, a three-month reserve is considered sufficient.

A CDC spokesman points out that such an investment for a smaller city might actually prove cost effective because it would allow for the reception of bulk and consequently lower priced shipments. For larger cities, storage facilities would not reduce costs significantly but would insure steady supplies.

It is generally acknowledged that storage equipment installation is not in the interest of suppliers. Municipal contracts tend to be awarded on a lowest bid basis. Consequently, there is little loyalty to suppliers on the part of municipalities and no supplier incentive exists to make long-term investments.

Estimates of HFS demand vary. One source sees industry capacity of over 100,000 tons per year, on a 100 percent basis, but feels current production is closer to 75,000 tons.

FERTILIZER CHEMICAL OUTPUT: MAY

CENSUS BUREAU NUMBERS IN SHORT TONS ON KEY FERTILIZERS:

	MAY	APRIL	MAY '85
Ammonia, syn., anhyd.	1,289,247	1,289,190	1,289,190
Ammonium nitrate	484,787	484,787	484,787
Ammonium nitrate/urea solutions	195,176	228,505	195,176
Monoammonium phosphates	74,961	156,106	74,961
Other ammonium phosphates	62,486	62,486	62,486
Ammonium sulfate	191,632	185,791	191,632
Diammonium phosphate	691,661	691,661	691,661
Nitric acid	81,006	834,286	81,006
Phosphoric acid	765,708	822,410	765,708
Sulfuric acid	5,112,124	5,211,487	5,112,124
Superphosphate, concentrated	182,688	233,290	182,688
Superphosphate, normal & enriched	19,257	19,257	19,257
Superphosphate, other phosphate fert.	1,091,144	1,137,418	1,091,144
Urea	605,492	605,492	605,492

HEAVY CHEMICALS

per year, for all end uses, because of low fertilizer industry operation rates.

Another puts HFS demand by the water fluoridation business between 18,000 and 18,000 tons per year. SSF demand from both water treatment and industrial accounts is estimated between 18,000 and 20,000 tons annually.

CDC estimates that water fluoridation is growing at about 2 percent per year. This is slightly higher than the growth of the population using public water, which in turn is slightly higher than population growth in general.

CDC says 62.5 percent of the US population on public water systems receives fluoridated water. This translates into 64.8 percent of the population as a whole.

BASES & SALTS

ARSENIC TRIOXIDE—Sources say that since Asarco, Inc. pulled out of the business in mid-1985 the market has been dominated by Boliden Metall AB of Sweden and Industria Minera Mexico SA.

A limited amount of material from Metallurgies Hoboken-Overpelt of Belgium is also on the market. Cominco of Canada is said to be aggressive lately, and a French producer is also said to be active.

In addition, one source says that Asarco sold from stockpile through May of this year, although Asarco now says it has withdrawn totally from the business.

Demand is called good by one supplier, based on the strength of the wood preservative industry, arsenic trioxide's major end use. Its use as a cotton defoliant and desiccant is not doing as well, he says.

The material is produced as a byproduct of copper mining, when the mining takes place in arsenic-rich ore. One observer predicts that more producers may be entering the market in years to come as foreign governments become more concerned with the proper disposal of mining byproducts. Brazil, Chile and Greece are cited as possible entrants. The Asarco material was 95 percent

pure. Sources say that 99 percent material is now more prevalent and preferred because it involves less handling and has less of a tendency to clog processing equipment.

Prices are thought by one source to be between 42c. and 45c. per pound l.o.b. warehouse. Another source agrees, but adds that this is for large quantities and subject to fluctuation based on supply/demand and currency exchange situations.

One source says that while the gap left by Asarco's exit was for the most part quickly filled, the company's extensive warehouse network was ideal for filling requirements of smaller accounts, some of which are at present undersupplied.

SODIUM CHLORATE—KemaNord, Incorporated has announced new list prices for its sodium chlorate crystal to be shipped in bulk. The new prices reflect a division by region as follows: Northern Zone price is \$315 per ton, delivered, and the Southern Zone price is \$335 per ton, delivered.

The Northern Zone includes the states of Virginia, West Virginia, Kentucky, Missouri, and Kansas and North to the Canadian border. The Southern Zone is the territory south of that.

These prices are effective immediately for spot customers, and as terms permit for contract customers. The new list prices replace the old uniform list price of \$420 per ton l.o.b., freight equalized.

Hercules Building Sizing Agents Unit

Hercules Incorporated has begun construction of an 80-million-pound-per-year facility to produce its new lines of "Neuphor" and "Hi-phase" emulsion sizing agents at its Hattiesburg, Miss., plant. The new plant should be operational by the first quarter of 1987.

According to a company spokesman, the new facility should provide significant new flexibility for the production of rosin-based emulsion sizing products. "Within the past year, similar new facilities were brought on line at the company's Kalamazoo, Mich., Portland, Ore., and St. Jean, Quebec, Canada plants.

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COATINGS & PLASTICS

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PRIME PIGMENTS

CADMIUM PIGMENTS — Effective July 28, Harshaw-Fillrol, Inc. increased selling prices for its cadmium sulfide and sulfoselenide pigments by an average of 2 percent, company spokesmen say.

Current selling prices for maximum quantities of representative pigments are: "Cadmium Lemon" (Yellow No. 30) at \$3.06 per pound, up 6 cents per pound from its previous price, "Cadmium Red" (Red No. 80) at \$5.40 per pound, up 10 cents from its previous price, and "Light Orange" (Orange No. 1405) up 20 cents per pound from its previous price, to \$10.00 per pound.

Although other producers have not yet announced price increases, they describe increased pressure to do so.

Producers who compound cadmium material exported by the UK and West Germany complain that the cost of imported material is up, due to environmental regulations abroad.

Sources explain that demand has stabilized since the early '80's, when demand was down due to what one producer describes as "undue end-user concern about heavy metal content." Use of cadmium pigments is said to be growing in production of specialty engineering polymers and alloys, (particularly ABS and its alloys), in requiring high-heat stability and light fastness.

In 1984, only 4 million pounds of cadmium pigments were produced; demand was between 5.5 million and 6 million pounds, with the remainder supplied by imports. One producer expects this year's to be 6 million pounds.

There is some overcapacity both domestic and worldwide; one source believes that total domestic capacity utilization rate is less than 60 percent of nameplate. This growth is due to increased demand in high-heat engineering resins.

CADMIUM SULFIDE — Asarco Inc. has rescinded its May price increases of 10 cents per pound for cadmium sulfate, a company spokesman reports. The current list price is now \$5.00 per pound for largest-volume quantities (2000 lbs and over, f.o.b. Denver).

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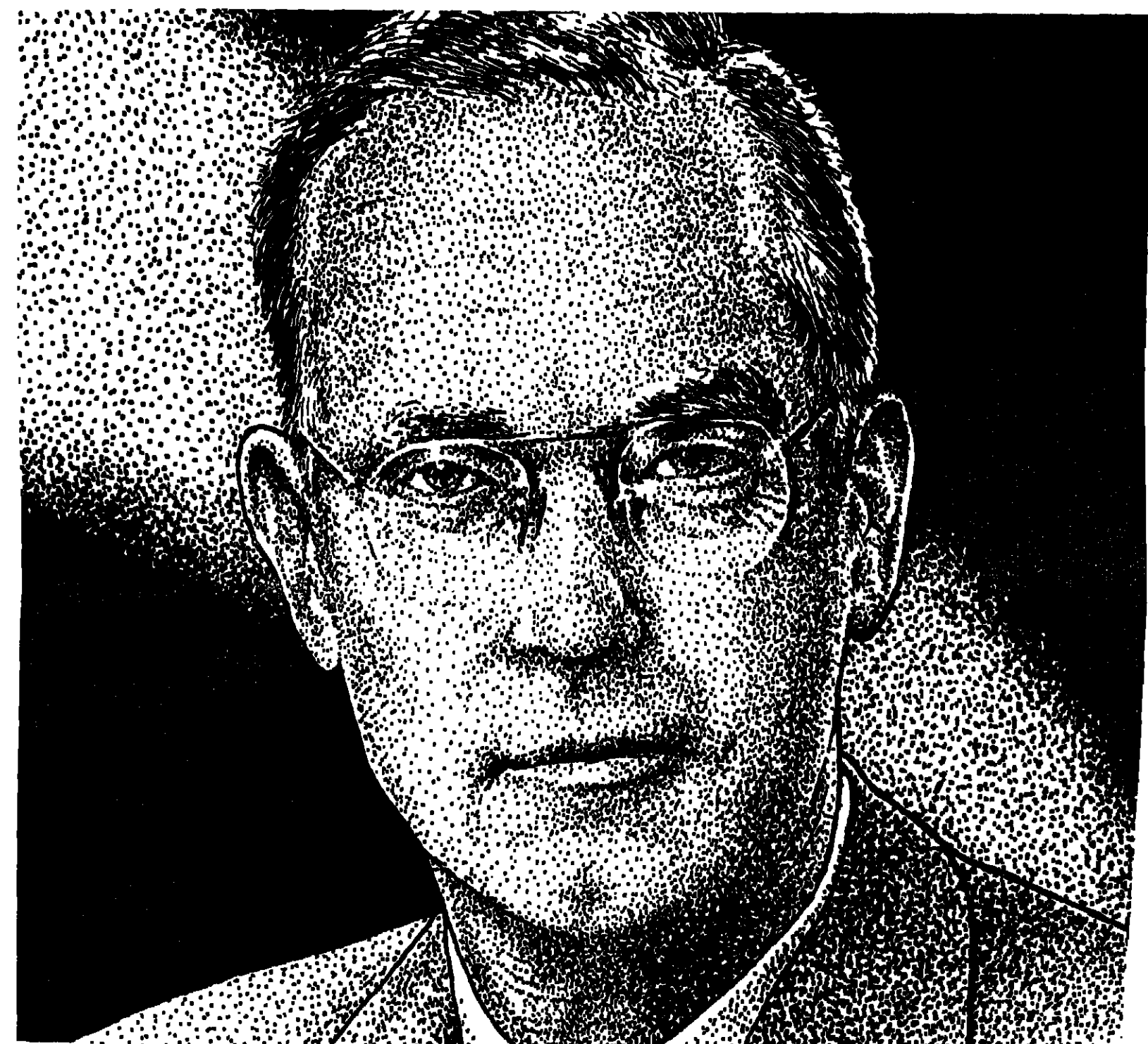
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This chemical prices section contains spot quotations and/or list prices of suppliers of chemicals and related materials on a New York or other indicated basis. The listings are based on price information obtained from suppliers. Note that posted prices do not necessarily represent levels at which transactions actually may have occurred. They do not represent bid and asked prices, nor a range of prices over the week. Price ranges may represent quotations of different suppliers as well as differences in quantity, quality and location. All matters under this heading are fully covered by copyright.

A

Albit alcohol, oil, crs.	lb.	15.00	-
Acetalddehyde, 99%, tanks, fr. alid. lb.	37	-	-
Acetic acid, high in water	-	-	-
Acetaminophen (see N-(4-hydroxy-phenyl)-	-	-	-
Acetonitrile, tech, flaked, bgs, l.i., f.o.b.	works	1.29	-
Acetoacetic acid, tanks, divd. E.	lb.	25	-
Acetic anhydride, tanks, bulk, f.o.b.	lb.	45%	-
Acetic anhydride prices, fr. higher in West	-	-	-
Acetoacetaldehyde, dms., l.i., divd.	lb.	1.29	-
Acetoacet-o-anilide, dms., l.i., divd.	lb.	2.70	-
Acetoacet-o-chloroanilide, dms., l.i., divd.	lb.	2.85	-
Acetoacet-o-toluidide, dms., l.i., divd.	lb.	1.98	-
Acetoacet-n-xylidide, dms., l.i., divd.	lb.	3.33	-
Acetone, tanks, divd. E.	lb.	25	-
divd. Zone 2 (Calif.)	lb.	27	-
divd. Zone 3 (W. of Rockies exclud-	lb.	27	-
ing Calif.)	lb.	27	-
Acetonitrile, tanks, fr. alid.	lb.	53	54%
Acetophenol (see Phenacetin)	-	-	-
Acetophenone, tech, tanks, f.o.b.	lb.	78	.85
perfume grade, tanks, bulk, f.o.b.	lb.	2.15	-
N-Acetyl-p-aminophenol, c.i., l.i., works	lb.	5.95	6.64
Acetylene black, imp., 85% com-	-	-	-
pressed, 100-150 bgs, c.i., l.i.	lb.	96	-
100%, 25-lb. bgs, same base	lb.	95%	-
Acetylene tetramethane, tanks, f.o.b.	works	.67	-
Acetylacetic acid, USP (see Aspirin)	-	-	-
Acetylfrutyl citrate, bulk, f.o.b.	works	1.28	-
Acetylfrutyl citrate-divd. E.	lb.	2.06	-
Acorone, tech, tanks, works	lb.	82	-
Acrylamide, sold, l.i.	lb.	1.00	-
soch., 100-lb. bags, tanks, works	lb.	74	.77
Acrylic acid, glacial, reg., tanks, divd.	lb.	87	-
tech., tanks, fr. alid.	lb.	90	-
Arylamide, tanks, works	lb.	39%	.46%
Arylamine, tanks, works	lb.	39%	.46%
high-impurity, nat. l.i., dms.	divd.	1.05	1.09
medium-impurity, nat., same basis to	lb.	94	.98
low-impurity, nat., same basis to	lb.	76	-
Adipic acid, resin grade, bulk, hopper	cars, fr. equaled	.57	-
bgs, l.i., c.i. fr. equaled	lb.	59	-
Age 598	lb.	4.30	9.85
Agar, 100-lb. bags to 100 lbs.	lb.	9.80	9.85
Alcohol, syn., C-8 to C-10, tanks, f.o.b.	lb.	.38	-
C-12 to C-18, tanks, divd.	lb.	.37	.58
C-14 to C-18, tanks, divd.	lb.	.67	-
C-16 to C-18, tanks, divd.	lb.	.80	-
Aldehyde, C-8, dms.	lb.	4.10	5.70
C-7, dms.	lb.	1.95	3.30
C-8, dms.	lb.	4.30	6.30
C-10, dms.	lb.	3.30	6.35
Algin (see Sodium alginate)	-	-	-
Alkali base, dry, flaked, 110-lb. dms.	lb.	3.72	3.85
Alkali base prices 110 lbs. Higher W. of Rockies	-	-	-
Allapoc Guatemalan / Honduran,	lb.	1.00	-
Jamaican, tanks	lb.	1.05	-
Allyl alcohol, tanks, f.o.b., Bayport, Tex.	lb.	.90	-
Allyl bromide, 500-lb. dms. 2,000 lbs.	lb.	5.50	-
works	lb.	5.50	-
Allyl chloride, 25-lb. cns.	lb.	3.90	4.5
Allyl caproate, tanks, f.o.b. works	lb.	.68	-
Allyl isohexanoate, bott.	lb.	5.40	6.85
Almond oil, white (see Almonds)	-	-	-
Almond oil, nat. butter, NF (f.p.s.)	lb.	3.50	3.6
sweet	lb.	1.24	1.31
Atoe, Cape, cns.	lb.	2.00	-
powd., cns.	lb.	2.25	.27
Curacao, kgs.	lb.	2.60	-
powd., kgs.	lb.	3.00	-
Aloni, NF, dms.	lb.	6.00	6.7
Alum, ammonium, tech. gran., c.i., l.i., works	lb.	35.00	-
FCC powd., fiber dms. works 100 lbs.	lb.	65.00	-
Alum, potassum, tech. gran. bgs, c.i., l.i., works	lb.	35.00	-
FCC powd., fiber dms. works 100 lbs.	lb.	65.00	-

Alumina, activated, gran, 100-lb. bgs.	40,000-lb. min. c.l., works	821.00	-
catclined, bulk, same basis	ton	354.00	-
100-lb. bgs, same basis	ton	390.00	-
hydrated, white, bulk, same basis	85	190.00	-
100-lb. bgs, same basis	ton	224.00	-
Aluminum acetate, basic, dms., l.c.l., works		3.25	-
Aluminum chloride, anhyd., actn., 500-600 lb. dms., c.l., l.i., works, fr. aquated	lb.	.50	.55
bulk, same basis	lb.	.45	.49
semi-lb. bgs, same basis	lb.	.49	.53
Aluminum chloride, coml., soln., 32° tanks, works	100 lbs.	15.00	-
ret. dms., c.l., works	100 lbs.	12.00	-
non-ret. dms., same basis	100 lbs.	20.00	-
Aluminum formate, distl. liq. 8% Al_2O_3 l.i., works	lb.	.55	-
Aluminum hydrate (see Alumina, hydrated)			
Aluminum hydroxide, dried, gel, NF, 75-lb. dms., c.l., l.i., works	2.75	3.50	-
Aluminum oxide, amorphous (see Alumina)			
Aluminum metal, 99%+ of more, 50-lb. pigs, 30,000-lb. lots, fr. and	lb.	.75	-
Aluminum paste, leafing grade, distl., lining, 2,400 lb. lots	lb.	1.40	-
lring, extra-fine, same basis	lb.	1.98	2.1
Aluminum silicofluoride, purifi., 100-kilo dms., l.i.	kilo	6.46	-
Aluminum powder, leafing grade, distl., lining, 2,400 lb. lots, dtd.	lb.	3.17	-
extra-fine, lining, same basis	lb.	.04	-
Aluminum stearate, pigs, c.l., l.i.	1.25	1.3	-
Aluminum sulfate, coml., grd., 100 lbs. bgs, c.l., works, fr. equated, basic 17% Al_2O_3 , l.i., Coasts	ton	185.00	-
West Coast	ton	217.80	-
liq., tanks, N.E. same basis	ton	175.00	-
iron-free, dry, bgs, c.l. same basis	ton	300.00	-
liq., tanks, same basis	ton	225.00	285.
Aluminum sulfate, USP, gran., dms. lb.	-	.37	-
Aminomaleic acid, USP, dms., 20,000 lbs., l.o.b. works	2.12	-	-
tech., l.i., same basis	1.88	-	-
p-Aminobenzoic acid, 1,000 kilos or more, dms., l.o.b. works	9.60	10.	-
2-Amino-4-chlorophenol dry and 14,000 lbs. or more, fr. and	6.79	-	-
Aminoethyl ethanalamine, tanks, fr. collect.	lb.	1.33	-
N-Aminoethyl piperazine, tanks, fr. collect.	lb.	1.05	-
2-Amino-2-ethyl-1,3-propanediol dms., l.i. l.o.b. works	1.82	-	-

2-Amino-2-methyl-1-propanol, 95% dms., c.l., l., f.o.b. works	lb.	95
tanks, f.o.b. works	lb.	89
o-Aminophenol, dms., f.o.b. Charlotte N.C.		7.95
p-Aminophenol, l.i. dms., f.o.b. Raleigh, N.C.	100	3.15
p-Aminosalicylic acid, USP, 50-lb dms., l.i.	100	16.50
Ammonia, anhyd. fertilizer, wholesale tanks, divd. Midwest termi- nals	ton	185.00
tankcars, f.o.b. Gulf Coast	ton	80.00
aqueous, 29.4% NH ₃ , anhyd. basis, tanks, frt. equivd. E. of Rock- land	ton	85
Ammoniacal liquor (see Ammonia, aqueous)		250.00
Ammoniacal galvanizing grade, bgs., c.l., f.o.b. works	1000s	315
Ammoniacal slt. white (see Ammonium chloride com.)		28.60
Ammonium borate, gran. dms., c.l.	lb.	90
Ammonium bicarbonate powder 15c. per lb. higher		
Ammonium bicarbonate, 300-lb. bgs., dms., c.l. works	100lbs	28.00
bgs., c.l. works	100 lbs	25.00
Ammonium bichromate photo-litho grade, gran 100-lb. dms., l.i.	lb.	2.00
works		
Ammonium bifluoride, bgs., l.i.	lb.	.70
Ammonium bromide, com. NF, gran. dms., c.l., l., f.o.b. works	lb.	1.31
Ammonium chloride, white, tech. fine gran. bgs., c.l.	lb.	18.00
works	1000s	40.00
USP, gran. dms., c.l.	lb.	14.60
Ammonium citrate, dibasic, 250-lb. dms. f.o.b. works	lb.	2.79
Ammonium dimolybdate, approx. 58%, 24-lb. bgs., c.l.	lb.	5.48
Ammonium fluoroborate, tech. dms., c.l., l.i. works, frt. equivd.	lb.	1.79
Ammonium heptamolybdate, crystall. dms., 24,000 lbs. f.o.b.	lb.	5.57
works		
Ammonium lauryl sulfate, tanks, f.o.b. works	lb.	.29
Ammonium lignin, sulfonated, bulk, f.o.b. Houston, Tex.	ton	72.00
Ammonium nitrocyano amide, fertilizer grade, 33.5% N, bulk, S.E. divd.	ton	130.00
Ammonia oxalate, tech. fine gran. 300-lb. dms., l.i., f.o.b.	lb.	1.42
works		
Ammonium pentaborate gran. bgs., c.l. works	lb.	.75
Ammonium pentaborate powder 20c. per lb. higher		
Ammonium persulfate, 225-lb. dms., 24,000 lbs. or more, f.o.b.	lb.	.58
works		
55-lb. bgs. same basis	lb.	.56 1/4
Ammonium phosphate (see Di- and monoammonia phosphates)		
Ammonium silicofluoride, dms., c.l., l.i.	lb.	.30 1/4
works		
Ammonium sulfate, lg. gran., bulk, c.l. works	ton	80.00
std. com., bulk, f.o.b. works	ton	80.00
tech. bgs., c.l., l.i. works	ton	108.00
Ammonium sulfide, lg. 40-44% tanks, 0.02% basis, frt. equivd.	ton	460.00
Ammonium sulfocyanate, 40-44% tanks, 0.02% basis, frt. equivd.	ton	460.00
Ammonium thioacetate, tech. crystall. bgs., c.l., works	lb.	1.02
tech. 50%, tanks, frt. equivd.	lb.	.93
Ammonium thiocyanate, photoreactive, 50%, tanks, f.o.b. works	lb.	.13
Ammonium zinc carbonate, soln. bulk	lb.	.72
Ammonium nitrate, primary mixed isomers, tanks, divd.	ton	.57
Amly alcohol, primary mixed isomers, tanks, frt. divd.	lb.	.48 1/4
Amlyl chloride, dibutylate, dms.	lb.	2.35
p-tert-Amylphenol, bulk	lb.	.91
Amryal oil, dms.	lb.	1.60
Anethole, tech. dms.	100	10.20
USP, dms.	lb.	3.05
Aniline, rock oil, basis	100	700.00
Aniline, tanks, f.o.b.	100	13.00
Anise oil, dms.	100	11.75

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37	Barium oxide, grd., dms., c.l.,	
40	divd.,	100 lbs.
5.40	lots bns, same basis	100 lbs.
	Barium peroxide, 700-lb. dms., c.l.,	
	works	lb.
	Barium stearate, bulk, t.l., f.o.b.	
	dest.	lb.
	Barium sulfate, tech. grade, same basis	lb.
	Barium sulfate, USP, X-ray diagnostic	
	grade, powder, 25 kilo bags,	
	10,000 kilo lots	lb.
1.39	Barium sulfide (black ash), dms.,	
	c.l.,	ton
	works	ton
1.50	Basil Egyptian	lb.
	French	lb.
	Basil oil, Comoros	lb.
	Basil oil, Grand Ver	lb.
	Battery acid, t.l., f.o.b., works	ton
2.15	Bauxite, calcined, refractory grade,	
2.50	57%-58% Al_2O_3 , Baltimore &	
9.25	Mobile	22
aphinis	Bay oil, NF, 66-67% dms.	lb.
	Bayberry wax, reg.	lb.
	Beeswax, food, bleached white,	
	bricks, 100-lb. cms.	lb.
	white, slabs, 100-lb. cms.	lb.
45	yellow, bricks, 100-lb. cms.	lb.
	yellow, slabs, 100-lb. cms.	lb.
	Benlonite, chem., c.l. bags, f.o.b.	
	works	lb.
10.50	Benzaldehyde, NF, dms.	lb.
	tech., dms., c.l., t.l.	lb.
	Prices are 4c. per lb. highest West of	
	the Rockies	
	Benzene, indust. or n.r.tation, barges, f.o.b.	
	Baton Rouge, La.	gal.
	Baytown, Tex.	gal.
	Beaumont, Tex.	gal.
	Castletown, Ky.	gal.
	Chicago district	gal.
	Chocolate Bayou, Tex.	gal.
	Clinton, Pa.	gal.
	Corpus Christi, Tex.	gal.
	Deer Park, Tex.	gal.
	Houston district, spot	gal.
	Wood River, Ill.	gal.
1.2	Benzene hexachloride, 99% gamma isomer	
1.90	Benzene orange	lb.
	big, containers, divd.	lb.
	Benzidine yellow, AAA, bags, divd.	lb.
	AAQA, bags, divd.	lb.
	AAQT, bags, divd.	lb.
	Benzonitric, USP, dms., 1,000 kg. lots	
	f.o.b., works	kg.
	Benzodicyclopentane, dms.	lb.
	Benzonic acid, tech. bags, c.l., f.o.b.	
	works	lb.
	USP cryst., dms., ton lots same basis	lb.
	Benzon gum, Surinam	lb.
	Benzophenone, N.F., 1,000 lbs. or	
	more, f.o.b.	lb.
	N.F., 1,000 lbs. or more, f.o.b.	kg.
	tech., 1,000 kils or more, f.o.b.	kg.
	works	kg.
	2,2-Benzothiazyl disulfide (see Mercaptol	
	ids)	
	Benzotriazole, fields, dms., 1,000 lbs.	
	or more, f.o.b. works	lb.
6.80	powd., dms., 1,000 lbs. or more,	
	same basis	lb.
	photo-grade, dms., 1,000 lbs. or	
	more, same basis	lb.
	Benzotrithiodate, reld., dms., t.l.,	
11	frt. equid.	lb.
	benzotrithiodate dms., c.l., works	lb.
	tanks, frt. equid.	lb.
	Benzoyl peroxide, regular gran.,	
	10,000-lb. lots or more, bags,	
	works, frt. equid.	lb.
	paste, 50% and 75% formulations,	
	dms., pallets, frt. equid.	lb.
5	Benzyl acetate, dms.	
5.50	equid.	lb.
	Benzyl alcohol, N.F., t.l. dms., frt.	
	equid.	lb.
	tanks, same basis	lb.
	photo grade, t.l. dms., same basis	lb.
	as	lb.
	tanks, same basis	lb.
	tech. grade, t.l. dms., same basis	lb.
	tanks, same basis	lb.
	Benzyl benzoate, dms.	
	c.l., t.l. frt. equid.	lb.
	Benzyl chloride, tech., non-rel. dms.	
	c.l., t.l. frt. equid.	lb.
	tanks, t.l. frt. equid.	lb.
20	Benzyl chloride, 25-lb. cns.	lb.

31.25	-	Borax, tech., gran., decahydrate	99% bgs., c.l., works	to
30.00	-	buk, c.l., works	to	
.80	-	tech., pentahydrate	bgs., c.l., works	to
1.05	-	buk, c.l., works	to	
(fine)	-	Borax, NF (see Sodium borate)		
.58%	-	Boric acid, tech., gran., 99.9%, bgs.	c.l., works	to
30.00	-	buk, c.l., works	to	
.75	.85	Boron trichloride, CP, 1,800-lb. cys.	to	
30.00	.90	Boron trisulfide, 50-lb. cys., 1,800-lb.	to	
98.00	-	buk, same basis	to	
45.00	-	Boron trifluoride, etherate, 500-lb.	to	
52.00	70.75	cys., U.I. f.o.b., works	to	
30.28	-	phenolate, 500-lb. cys., U.I. f.o.b.	to	
39.50	-	basis	to	
10.28	-	Bromine, dms., U.I., works	to	
2.70	15.00	buk, 45,000-lb. min. works	to	
3.10	3.00	pure U.I. dms.	to	
3.00	3.20	Bromine dhd., prices for dms. and buk	to	
3.06	3.10	10- per lb. Higher, Bulk U.I. pri	to	
2.86	3.05	Higher for 30,000-lb. min. a	to	
43.60	-	Higher for 15,000-lb. min.	to	
1.25	-	Bromochloromethane, dms., c.l., f.o.b.	to	
.73	.83	Midland	to	
1.75	-	Butadiene, tanks, f.o.b.	to	
1.23	-	1,4-Butadiene, tanks, f.o.b., tri	to	
.73	-	squid.	to	
.70	-	dms., samp basis	to	
.70	-	Butene-1, tanks, f.o.b. works	to	
.70	-	n-Butyl acetate, syn., tanks, tri. ald.	to	
.70	-	n-Butyl acrylate, tanks, tri. ald.	to	
.70	-	n-Butyl alcohol, syn., tanks, c.l., f.o.b.	to	
.70	-	tri. ald.	to	
.70	-	sec-Butyl alcohol, syn., tanks, dhd.	to	
.70	-	tert-Butyl alcohol, syn., tanks, dhd.	to	
.70	-	Butyl aldehyde (see Butyraldehyde)	to	
.88	.70	Butyl benzyl phthalate, tanks, tri	to	
(see Lindane)	-	Butyl chloride, tanks, works	to	
4.40	-	Butyl cyclohexyl phthalate, tanks	to	
3.38	3.89	n-Butyl ether, dms., c.l., U.I. works	to	
5.90	6.05	n-Butyl isocetyl phthalate, tanks	to	
5.96	6.20	n-Butyl lactate, tanks, f.o.b. works	to	
7.32	7.40	n-Butylmethyl, 15% soln., 1,000-lb.	to	
10.00	11.50	lots or more, cys.	to	
12.50	-	tanks, 3,000-lb. min., 100% basis	to	
.55	.58	dhd.	to	
1.73	1.75	Butyl methacrylate, tanks, tri	to	
1.60	-	equid.	to	
3.50	3.60	Butyl octyl phthalate, tanks, dhd.	to	
7.45	-	E.	to	
4.35	-	Butyl oleate, dist., dms., c.l.	to	
1.80	-	tanks	to	
3.40	-	per-tert-Butyl alcohol, tanks, tri	to	
4.35	-	Butyl phthalate (see Dibutyl phthalate)	to	
1.80	-	Butyl sebacate cosmetic, dms., 77 dms.	to	
1.80	-	tri. ald.	to	
1.80	-	tri. ald.	to	
1.80	-	Butyl sebacate tech., U.I.	to	
1.80	-	tanks	to	
1.80	-	Butylamine (see Mono-, Di- and Tributylamine)	to	
1.80	-	tert-Butylamine, dms., c.l., U.I. f.o.b.	to	
1.80	-	works	to	
1.80	-	tanks, same basis	to	
1.80	-	Hydroxylated hydroxybenzoate, food grade,	to	
1.80	-	dms., dhd.	to	
1.80	-	Butylated hydroxybenzoate, food grade,	to	
1.80	-	grades, c.l., U.I. bgs., dhd.	to	
1.80	-	tech., bgs., c.l., U.I. dhd.	to	
1.80	-	1-3-Butylene glycol, tanks, dhd.	to	
1.80	-	Butyraldehyde, tanks, dhd.	to	
1.80	-	Butyric acid, tri. ald.	to	
1.80	-	Butyric acid, tanks, tri. ald.	to	
1.80	-	Butyric ether (see Ethyl butyrate)	to	
1.80	-	Butyrolactone, tanks, f.o.b. plant	to	
1.80	-	n-Butyrolactone, dms., c.l., works	to	
1.80	-	tanks, dhd.	to	

237.00	-	Calcium carbide, std., generat.
192.00	-	bulk, c.i., f.o.b. works.
	-	Calcium carbonate, pulverized
220.00	-	mesh, bgs., bulk,
265.00	-	slurries, 54% solids,
	-	basis
614.00	-	72% solids, same basis
589.00	-	quicklime, gran. incl., bulk,
	-	8.
3.80	-	Calcium carbonate, coated, bgs.
	-	works
4.03	-	Calcium carbonates, precip.
3.47	-	d.t.
2.35	-	Calcium carbonate precip. mech.
	-	bgs., c.i., works.
1.66	-	precip. treated, bgs., c.i., sum.
.87	-	dry, 50% solids, works.
.33	-	ultrafine, USP bgs.
.70	.34%	c.i., works.
Whipped W. of Rockies,	-	Calcium chloride, conc. reg. grade
std. c. to 2 1/2% per-lb.	-	80% flakes, bulk, works.
and 4c. to 5 1/2% per-lb.	-	100-lb. bgs., c.i., std.
	-	basis
1.12	-	anhyd., 94-97%, flake or pellet,
.26	.26%	c.i., same basis.
.80	-	60-lb. bgs., c.i., same basis.
.86	-	brining grade, 80-lb. bgs.
.26	.28	Calcium chloride, 100 percent
.52%	-	sls., t.c., t.t., barge
.94	-	45% same basis
.39	-	Calcium chloride, USP, gran., 22
.365	-	dms., l.t., fr. eqstd.
.70	-	Calcium citrate, purified, 500-lb. d.
	-	10,000 lbs. or more, f.
	-	works.
	-	Calcium cyanamide, indust., an
	-	dms., works.
.53	-	Calcium gluconate, USP powd. l.t.
.99	1.00	hydride, lump, dms.
	-	1,000-lb. lots, works.
1.01	-	Calcium hypochlorite, 100-lb. d.
1.85	-	trucksloads, ship-t. E. of Fla
	-	100
.35	-	Calcium hypophosphite, dms.,
1.58	-	500 kilos or more
	-	Calcium iodate, FCC dms., l.
	-	works.
15.45	-	Calcium iodide, 50-kilo dms., f.
	-	works
14.75	-	Calcium lactate, NF, pure, gran.
.88	-	drate, dms., 24,000 lbs.
	-	more, f.o.b. works.
.45	.47	NF, gran., trihydrate, same basis
.86	-	special gran., dried grade, same
.83	-	sls.
.70	-	Calcium naphthenate, liq., 4% Ca.
	-	t.o.b. plant, E. of Rockies.
	-	di-Calcium pantothenate, USP,
	-	500-kilo lots.
.91	.97	di-Calcium pantothenate, feed gr.
.92	-	100 lbs. or more
.85	.82	more
.55	.58	di-Calcium pantothenate, calcium c.
(amine).	-	ride complex, feed grade,
1.31	-	grants per lb., f.o.b., fr. at
1.17	-	100 lbs. or more
8.80	8.85	Calcium phosphate, dibasic, f.
	-	grade, 18 1/2% P. bulk, c.i.,
	-	f.o.b. works.
1.24	1.30	Calcium phosphate, dibasic, ethydr.
1.24	1.30	USP bgs., c.i., t.t., works
.72	-	equid.
.29%	.38	anhyd., USP, same basis.
.44%	-	dentific grade, same basis.
1.20	-	Calcium phosphates, monobasic
.93	-	monohydrate, food grade
.64	-	bgs., c.i., t.t., works
	-	equid.
	-	anhyd., feed grade, same b.
	-	sls.
	-	tribasic, NF precip., bgs., 100
	-	equid.
	-	Calcium propionate, dms., 2,000 lb.
	-	or more f.o.b., fr. atld.
	-	Calcium silicate, hydrated, bgs., c.
	-	works
	-	Calcium silicate, paint grade (see Vol.)
3.73	-	Calomel, NF, mild powd., 100-lb. d.
	-	l.o.b. works.
	-	Camphor, 100-lb. dms.

or size,			
ton	402.00	-	
328-			
f.o.b.			
ton	34.80	-	
same			
ton	187.00	-	
ton	98.00	-	
work-			
ton	87.00	-	
g.l.,			
lbs.	.0742	.1950	
ton	370.00	430.00	
alum,			
ton	95.00	140.00	
Face			
ton	185.00	-	
ja,			
ton	180.00	170.00	
77-			
ton	153.00	-	
ton	196.00	-	
bulk,			
ton	217.00	-	
ton	279.00	-	
ton	285.00	-	
be			
ton	99.75	-	
ton	118.00	-	
lb.	.90	-	
ma,			
lb.	3.82	-	
hyd.			
ton	400.00	450.00	
lb.	1.80	-	
lb.	10.50	13.25	
msk-			
lbs.	92.40	-	
bulk,			
ton	13.75	14.50	
lb.	5.50	-	
ton	23.65	25.65	
o.k.			
or			
ton	2.60	-	
ton	2.10	-	
lb.	2.80	-	
c.l.	.85	-	
000-	10.50	11.50	
kade,			
ton	8.00	8.50	
160-			
kid,			
ton	2.75	-	
l.t.,			
ton	228.00	-	
int.			
os.	62.50	-	
os.	71.75	-	
os.	49.90	-	
ite,			
ton	60.50	-	
os.	54.98	-	
ton	62.50	-	
g.	.50	.55	
ton	.07	-	
(esthion)	8.80	-	

CHEMICAL PRICES		
AUGUST 8, 1986		
Acetylene, bulk, c.i.		
...lb.	.3225	-
...lb.	.3425	-
Acrylonitrile		
...lb.	.3450	-
...lb.	.3860	-
Allyl, bulk, c.i.		
...lb.	.3850	-
...lb.	.4050	-
Allyl, bulk, c.i.		
...lb.	.3125	-
...lb.	.3325	-
Ammonium, bags		
...lb.	.30	.30%
...lb.	.32	.34%
Ammonia, bulk		
...lbs.	14.50	-
...lbs.	14.50	-
Ammonia, works ton		
...consumers	420.00	-
Ammonia, bulk		
...lb.	.35	-
Ammonia, bulk		
...lb.	.31	-
Ammonia, bulk		
...4,000 gals.)	.24	-
Ammonia, bulk		
...lb.	75.00	100.00
Ammonia, bulk		
...lb.	3.25	-
Ammonia, bulk		
...lb.	6.25	9.75
Ammonia, bulk		
...lb.	135.00	140.00
Ammonia, bulk		
...lb.	1.95	2.05
Ammonia, bulk		
...lb.	1.75	1.90
Ammonia, bulk		
...lb.	1.55	1.65
Ammonia, bulk		
...lb.	1.10	-
Ammonia, bulk		
...lb.	1.30	1.45
Ammonia, bulk		
...lb.	32.75	-
Ammonia, bulk		
...lb.	40.75	-
Ammonia, bulk		
...lb.	26.85	-
Ammonia, bulk		
...lb.	48.00	7.00
Ammonia, bulk		
...lb.	1.00	-
Ammonia, bulk		
...lb.	1.45	-
Ammonia, bulk		
...lb.	1.365	-
Ammonia, bulk		
...lb.	3.70	-
Ammonia, bulk		
...lb.	.80	.94
Ammonia, bulk		
...lb.	.72	.78
Ammonia, bulk		
...lb.	.32%	.33
Ammonia, bulk		
...lb.	.74	-
Ammonia, bulk		
...lb.	.78	-
Ammonia, bulk		
...lb.	.76	-
Ammonia, bulk		
...lb.	.74	-
Ammonia, bulk		
...lb.	.65	-
Ammonia, bulk		
...lb.	1.10	-
Ammonia, bulk		
...lb.	.70%	.83
Ammonia, bulk		
...lb.	154.00	-
Ammonia, bulk		
...lb.	19.00	35.00
Ammonia, bulk		
...lb.	11.00	-
Ammonia, bulk		
...lb.	7.93	-
Ammonia, bulk		
...lb.	3.71	-

[illegible]

NOTE: A unit-ton is 1 percent of 2,000 pounds of the basic constituent or other standard of the material. The percentage figure of the basic constituent multiplied by the unit-ton price, shown in Chemical Market Reporter gives the price of 2,000 pounds of the material.

o-/ortho
ord./ordinary
oz./ounce
P/phosphorus
p-/pen
Pac./Pacific
pl./proof
phos./phosphate
photo./photographic
pkgs./packages
powd./powder
precip./precipitated
prod./producer
pt./point
pulv./pulverized
purif./purified
redist./redistilled
retd./refined
rety./refinery
result./resulted
ret./returnable
SO./specially denatured
S./single distilled
SE./Southeast
sec./secondary

secs./seconds
sp.g./specific gravity
ship./shipment
solv./solvent
std./standard
syn./synthetic

tanks./refined tank
tech./technical
tert./tertiary
tkt./tickets
to./to
to ref./refers to sheet
of 2,000 pounds
TVA./Temporary vol-
untary allowance
L.N./low-noxane
USP./United States
Pharmaceutical
vie./viscosity
VM&P./various uses
A./plasters
W/Wet
wipes./wipes
W./Water

ends of the basic constituent or other standard of the material multiplied by the unit-ton price shown in Schedule

[illegible]

00	-	medium shade, bbia, same basic.	lb.
00	-	medium-light shade, bbia, same basic.	lb.
00	-	Cadmium, 100 lbs. of.	lb.
35	3.25	100-lb. lots, frt. and, E. of	lb.
90	-	Rockies.	lb.
00	-	Cadmium fluoroborate, liq. conc. dms.	lb.
00	-	1.25, frt. and, E. of	lb.
00	-	medium-light shade, bbia, same basic.	lb.
00	-	Cadmium-mercury lithopone, maroon shade, bbia, frt. and, E. of	lb.
00	-	Rockies.	lb.
20	-	Cadmium metal lithos or mica, ton lots, ca. dms.	lb.
31	15.50	Cadmium nitrate, purif., fne. 400-lb. lots, ca. 1.1, 1.0 ship. pt.	lb.
50	-	Cadmium-selenide lithopone, light shade, bbia, 400-lb. lots, frt. and, E. of	lb.
40	-	Rockies.	lb.
00	-	deep shade, bbia, same basic.	lb.
00	-	Cadmium-selenide lithopone, light shade, bbia, same basic.	lb.
00	-	light shade, bbia, same basic.	lb.
00	-	medium light shade, bbia, same basic.	lb.
67	-	medium shade, bbia, same basic.	lb.
70	-	maroon shade, bbia, same basic.	lb.
71	-	Cadmium-selenide lithopone, yellow shade, bbia, same basic.	lb.
76	12.00	Cadmium-sulfate, 500 lbs. quantity, 1.0 ship. pt.	lb.
76	7.85	Cadmium-sulfate, 500 lbs. quantity, 1.1, frt. and, E. of	lb.
80	7.80	Caffeine, dom, USP, spm. cryst. anhyd. power, 100-lb. dms., ca. 1.1, frt. and, E. of	lb.
00	-	imp. cr.	lb.
00	-	10,000 lbs. or more.	lb.
00	-	Catalpine, USP dms.	lb.
00	-	Celarsus oil, dms.	lb.
00	-	Celarsol, two dms.	lb.
00	-	Celarsol, 1000 lbs. dms.	lb.
00	-	Celarsol, 1000 lbs. dms.	lb.

10.69	16.20	Camphor, syn. tech., 165-166 °C. dms.
		5,000 lbs. or more lb.
10.26	14.50	USP, powder, 165-166 °C. dms., 5,000
		lb. lots or more lb.
6.10	7.07	syn. reid., 1-oz. tablets, dms. 100
		lb. lots or more lb.
2.27		Camphor oil, yellow, 25-36 °C. dms. .. lb.
		white, dms. lb.
3.22		ess. pure, 1,070 °C. dms. lb.
		Camphene oil, Indonesian dms. lb.
		Candellia wax, crude, pure, dms. lb.
		reid. pure, bgs. lb.
4.60		Capric acid solid; capric, pure; dms. lb.
7.20	1.50	Capric acid, liquid; capric, pure; dms. .. lb.
2.10		Capric aldehyde (capryl; C-10) dms. lb.
		one lb.
		Caprolactam monomer, flake, bgs., U. lb.
		1-c.b. shipping point lb.
3.97	4.00	Capryl, molten, same as lb.
4.47	4.50	Capryl alcohol ess. 92-99% tanks lb.
		1-c.b. works lb.
6.77	6.80	Caprylic acid, coml. pure tanks lb.
5.27	5.30	Caprylic acid, pure tanks lb.
6.37	6.75	Capriculum (see Capriculum oleosum)
7.37	6.40	Capriculum oleosum NF, from coml. lb.
		pepper dms. lb.
		Capriculum oleosum NF, from African pepper, dms. lb.
		500,000 purgeny lb.
2.97	3.00	1,000,000 purgeny lb.
4.05		Caraway oil, Poland, dms. lb.
		Caraway seed, Dutch, bgs. lb.
		Cassia, bgs. lb.
		Cassia black, Turkish seed extruding lb.
4.60		(FEF), bulk, c.i., works lb.
		bgs., c.i., works lb.
4.70	4.85	general purpose (GPF), bulk, c.i., lb.
1.50	1.70	bulk, c.i., works lb.
39.50	39.00	bulk, c.i., works lb.
		high abrasion (HAF), high structure, lb.
		bulk, c.i., works lb.

[illegible]

..b..	3.70	4.00
..b..	3.70	4.80
..b..	5.25	-
..b..	4.25	5.30
..b..	48	48
..b..	50.00	55.00
..b..	1.30	-
..b..	1.75	-
..b..	1.59	-
..b..	1.87	-
..b..	1.58	-
..b..	1.50	1.70
..b..	1.60	1.90
..b..	1.35	-
..b..	5.40	-
..b..	4.50	1.90
..b..	60	-
..b..	1.85	1.90
..b..	1.85	1.27
..b..	4.25	4.50
..b..	4.94	-
..b..	2.70	3.00
..b..	545.00	-
..b..	370.00	-
..b..	15.00	-
..b..	13.50	-
..b..	1.30	-
..b..	45	48 1/2
..b..	45	47 1/2
..b..	48 1/2	48 1/2

WEEK ENDING AUGUST 8, 1986

[illegible]

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3

WEEK ENDING AUGUST 8, 1986

[illegible]

Phthalocyanine blue, water dispersible, bks., same basis	lb.	7.05	7.76
Phthalocyanine green toner, all grades, bks., frt. alt. E. of rock	lb.	8.10	10.10
Phthalocyanine green toner, reactivated, bks., same basis	lb.	7.45	9.20
Phthalocyanine toners, dms., 500-lb. lots	lb.	6.81	—
Picoline, red, moist bulk	kilo	2.81	—
Picloric acid, pure paste, 25-lb. dms., c.t., dry basis, f.o.b. Charlotte, N.C.	lb.	6.00	—
Picloric acid, 25-lb. dms., c.t., dry basis, f.o.b. Charlotte, N.C.	lb.	6.00	—
Pigment green B, bgs.	lb.	2.20	—
Pigment green hydrochloride, USP	lb.	1,600.00	2,000.00
Pimento see Allspice			
Pimento leaf oil, dms.	lb.	14.50	—
Pine oil, 60% min. alcohol content, bulk, f.o.b. works	100 lb.	47.00	53.00
Pine oil, c.t., same basis	100 lbs	51.00	54.00
p-Phenol, perfume grade	kilo	1.82	—
p-Phenol, technical grade	lb.	.18	—
Picric acid, tech. grade, tanks	lb.	2.30	—
Piperazine	lb.	.35	—
Piperazine, anhyd., dms., U.I., frt. alt. E.	lb.	1.80	—
Piperazine, 30% dms., f.o.b. U.S. to lots, frt. alt.	lb.	2.25	2.30
Piperazine dihydrochloride, 53% dms., U.I., frt. alt.	lb.	2.00	—
Piperazine hexahydrate, 4% dms., U.I., 1,000-lb. lots	lb.	1.60	—
Piperazine pyrazole, 42% dms., U.I., frt. alt.	lb.	1.80	—
Piperidine dist., 99% min., dms., c.t., U.I.	lb.	6.92	—
Pipercory butoxide oil, chvd. E.	lb.	5.00	—
Platinum, metal, works	Troy oz.	502.00	—
Plasticizer resin, pellets, nat., U.I.	lb.	1.84	—
Polyester resin, unsaturated, orophthallic, bulk, tanks	lb.	—	—
Polyethalene, same basis	lb.	.51	—
Polyethylene resin, high-density molding, g.p., hopper cars, frt. alt.	lb.	.56	—
Polyethylene resin, high-density molding, g.p., hopper cars, frt. alt.	lb.	.43	—
Polyethylene resin, high-density molding, g.p., hopper cars, same basis	lb.	.47	—
Polyethylene resin, high-density molding, g.p., hopper cars, same basis	lb.	.45	—
Polyethylene resin, low-density film, low hopper cars, same basis, clarity 11m, hopper cars, frt. alt.	lb.	.36	—
Polyethylene resin, low-density film, pallet shrink film, hopper cars, same basis	lb.	.35	—
Polyethylene resin, low-density film, extrusion coating, same basis	lb.	.38	—
Polyethylene resin, low-density film, extrusion coating, same basis	lb.	.36	—
Polyethylene resin, low-density film, extrusion coating, same basis	lb.	.38	—
Polyethylene resin, low-density film, extrusion coating, same basis	lb.	.36	—
Polyethylene resin, low-density film, extrusion coating, same basis	lb.	.40	—
Polyethylene resin, low-density film, extrusion coating, same basis	lb.	.45	—
Polyethylene resin, low-density film, extrusion coating, same basis	lb.	.547	—
Polyethylene resin, low-density film, extrusion coating, same basis	lb.	.70	—
Polyethylene resin, low-density film, extrusion coating, same basis	lb.	.587	—
Polyethylene resin, low-density film, extrusion coating, same basis	lb.	.871	—
Polyethylene resin, low-density film, extrusion coating, same basis	lb.	.587	—
Polyethylene resin, low-density film, extrusion coating, same basis	lb.	.871	—
Polyethylene resin, low-density film, extrusion coating, same basis	lb.	.587	—
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Polyethylene resin, low-density film, extrusion coating, same basis	lb.	.871	—
Polyethylene resin, low-density film, extrusion coating, same basis	lb.	.587	—
Polyethylene resin, low-density film, extrusion coating, same basis	lb.	.871	—

Potassium bifluoride, tech. dms. 11, works, frt. equiv. ....	.45	.49
Potassium bicarbonate, NF, gran., 100-lbs. dms., c.i., works, frt. equiv.	90	1.20
Potassium borohydride, powd. dms., 100-1,000 lbs., works	18.00	20.00
Potassium bromate, gran., powd., 200-lbs. dms., c.i., works, frt. equiv.	1.06	-
Potassium bromide, NF, gran., dms., c.i., f.o.b. works	1.12	-
Potassium carbonate, liq. 47% K_2CO_3 test, w. v., works, frt. equiv.	15.40	-
Potassium carbonate, NF, gran., 100-lbs. dms., c.i., U.I. works, frt. equiv.	20.65	-
Potassium carbonate, NF, gran., 100-lbs. dms., c.i., U.I. works, frt. equiv.	32.50	-
Potassium carbonate, NF, gran., 100-lbs. dms., c.i., U.I. works, frt. equiv.	36.40	-
Potassium carbonate, hydrated, 88% K_2CO_3 dms., c.i., U.I. works, frt. equiv.	34.80	-
Potassium carbonate, NF, gran., 100-lbs. dms., c.i., U.I. works, frt. equiv.	33.70	-
Potassium chlorate, NF, gran., 400-lb. dms., 5-dm. cots., lb. works, frt. equiv.	40	46
Potassium chlorate, NF, gran., 400-lb. dms., 5-dm. cots., lb. works, frt. equiv.	30	-
Potassium chlorate, NF, gran., 400-lb. dms., 5-dm. cots., lb. works, frt. equiv.	14.5	-
Potassium chlorate, NF, gran., 400-lb. dms., 5-dm. cots., lb. works, frt. equiv.	40	-
Potassium chloride, chemical grade, 99.95% KCl, bulk, c.i., f.o.b. works, frt. equiv.	105.00	-
Potassium chloride, chemical grade, 99.95% KCl, bulk, c.i., f.o.b. works, frt. equiv.	1.12	-
Potassium chloride, chemical grade, 99.95% KCl, bulk, c.i., f.o.b. works, frt. equiv. ....	.67	-
Potassium chloride, chemical grade, 99.95% KCl, bulk, c.i., f.o.b. works, frt. equiv. ....	.87	-
Potassium chloride, chemical grade, 99.95% KCl, bulk, c.i., f.o.b. works, frt. equiv. ....	.57	-
Potassium chromate, purif., (cryst. dms., works, frt. equiv.	93%	-
Potassium citrate, NF, gran., 200-lb. dms., frt. alt.	1.32	-
Potassium cyanide, dms., 20,000-lb. lots or more, f.o.b. works, frt. equiv.	1.32	-
Potassium dichromate (see Potassium bichromate)	-	-
Potassium fluoride, tech. dms., c.i., U.I. works, frt. equiv.	1.40	1.42
Potassium fluoride, anhyd., dms., c.i., U.I. works, frt. equiv.	1.88	-
Potassium gluconate, dms., U.I., f.o.b. works, frt. equiv.	1.45	-
Potassium hydroxide, tech. (see Potash, caustic)	2.10	-
Potassium hydroxide, tech. (see Potash, caustic)	1.29	1.31
Potassium iodide, USP, tablet, 100-lb. dms., c.i., U.I. works, frt. equiv.	10.72	12.39
Potassium iodide, USP, tablet, 100-lb. dms., c.i., U.I. works, frt. equiv.	11.32	13.55
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	59.00	-
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	67.00	-
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	44	-
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	44.00	55.00
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	46.00	47.00
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	50.00	51.00
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	50.90	60.00
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	267.00	274.00
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	277.00	284.00
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	470.00	-
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	2.54	-
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	1.01	-
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	1.06	-
Potassium metasilicate, gran., dms., U.I., works, frt. equiv. ....	.78	-
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	1.09	-
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	1.17	-
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	1.38	-
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	78.80	-
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	72.80	-
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	43.75	47.25
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	48.00	49.50
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	1.52	-
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	1.42	-
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	18.90	-
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	23.90	-
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	26.05	-
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	32.05	-
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	28.10	-
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	33.10	-
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	53.30	-
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	46.65	-
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	11%	.15
Potassium metasilicate, gran., dms., U.I., works, frt. equiv. ....	.80	1.20
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	2.20	3.30
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	N.A.	-
Potassium metasilicate, gran., dms., U.I., works, frt. equiv.	160.00	160.00

[illegible]

Pine bran oil, refined, dms. 11. lb.	1.25	-
Rhinoleic acid (see Castor oil-acid, aprite).		
Rochelle salt (see Potassium-sodium sulfate).		
Roofing pitch (see Asphaltum, roofing, maling).		
Rose oil, nat. NF, Bulgarian, otto,		
bols. kilo.	3850.00	3990.00
Turkish, otto, bols. kilo.	2250.00	3000.00
Rosemary oil, NF, Spanish, dms. lb.	9.00	14.50
Rosin, Turkish, dms. lb.	8.75	15.00
Rotenone resin, 30-45%, 100-lb. dms.		
works. unit-lb.	.21	.23

Saccharin NF, gran. soluble, dms.		
1,000-lb. lots, frt. ad. lb.	2.50	2.75
Saccharin NF, powd. soluble, dms.		
from 20,000-lb. lots, frt. ad. lb.	3.75	-
Safflower oil, nat. refined, tanks, N.Y.,		
ad. lb.	47	50
ad. lb.	83	87
Sage leaves, Dalmatian, No. 1, bgs. lb.	1.76	-
Albanian, bgs. lb.	1.30	-
Irish, lb.	2.80	-
Sage oil, Clary, French, bols. kilo	90.00	-
Dalmatian, cns. lb.	9.50	10.00
Spanish, kilo	12.50	-
Salsaparilla, French, bols. kilo	3.60	-
Salicylic acid, NF, gran. powd., dms.		
2,000-lb. lots, one ship. lb.	1.07	1.10
SALICYLIC acid, tech., dms., c.i., t.i.,		
works. lb.	1.23	1.41
USP, cryat., same, 1,000 lbs. or		
more. lb.	1.33	1.63
USP, powd., dms., 1,000 lbs. or		
more. lb.	1.68	-
Salt (see Phenylsulfonate)		
Salt, evaporated, common, 80-lb. bgs.		
c.i., t.i., North, works. lbs.	4.02	-
same, same basis lb.	60.00	61.20
chemical grade, same, tanks, N.Y.,	4.30	-
Salt, rock, medium, coarse, same basis,		
80-lbs. lb.	2.70	-
Salt, same basis lb.	18.00	25.00
Salsoda, c.i., same, tanks, N.Y.,		
N ₂ O ₃ basis, f.o.b. works E ton	65.00	98.00
same basis W ton	90.00	99.00
Sandalwood oil, E. Indian kilo	145.00	-
Indonesian kilo	102.00	-
Sarcosine, tech., tanks, works, frt.		
equd. lb.	50	-
Schaeffer's paste, dms., 100%		
basis, works.	2.59	-
Scolamine hydrobromide, USP,		
100-lb. lots, bols. oz.	36.00	46.50
Sebacic acid, CP, bgs., c.i. works, lb.	2.14	-
purif. bgs., work. lb.	2.13	-
Sedilic mulure, dms., 5,000-lb. lots, lb.	30.2	-
Selenium, powd., 99.99% Se, dms.,		
cont. 99.9% Se, same, tanks, N.Y.,	13.00	-
same leaves, Alexandria, whole and	10.00	15.00
hell, bols. lb.	.75	.80
Timothy, No. 1, lbs. lb.	.70	.71
powd., bols. lb.	.90	1.10
Sesame oil, USP, dms., L.C.I. lb.	1.00	1.20
Sesame seed, Central American,		
buled, bgs. lb.	50	.51
Stenna paper, pure, paper lugs,		
c.i. works.	191	207
Raw, paperbgs., c.i. works.	184	234
Silica, amorph., dry-grd., bgs., c.i.,		
cryst. ton	31.00	32.50
98%, 200 mesh, ton	32.00	33.50
93%, 97%, 325 mesh, ton	34.50	36.50
98.5%, 325 mesh, ton	37.00	-
99.5% 325 mesh, ton	51.50	54.50
Silica, dry-grd., bgs., c.i., works, 99.9%		
400 mesh, micronized, ton	72.00	75.00
99% under 15 microns, mi- ton	79.50	82.50
99% under 10 microns, mi- ton	104.00	105.00
Silica, hard-quartz, 99.5% SiO ₂ , 325		
cryst. ton	37.00	-
140 mesh, bgs., c.i., works, ton	34.75	-
Silicon tetrachloride, tech., dms.,		
works. lb.	.50	-
Silver, bullion, lb.	.36	-
Silver cyanide, 80% Ag, 20% Cu,	6.285	-
Silver cyanide, 80% Ag, 20% Cu,	4.2188	-
Silver nitrate, ACS, 68.2 Troy oz. AG/		
100-lb. oz. or AgNO ₃ oz.	3.153	-
Sorbapark, crushed, bols.	1.00	-
powd., lbs.	1.35	1.85
Soda ash, dms., 55%, 100-lb., paper		
bgs., c.i. works, f.o.b. ton	83.00	-
cryst. ton	120.00	-
light 55%, 100-lb., paper bgs., c.i.		
same basis ton	150.00	-
Soda, caustic, 50% solution tanks,		
Gulf Coast works, f.o.b. ton	123.00	-
equal, 76% Na ₂ O ton	175.00	195.00
73% Na ₂ O ton	200.00	225.00
fals. 76%, 700-100-lb. c.i. works.	505.00	570.00
fals. 76%, 700-100-lb. c.i.,		
ton. ton	520.00	570.00
Soda ash, 55%, 450-lb. dms., c.i.,		
gran. ton	620.00	-
beads, 76%, 400-lb. dms. c.i.,		
works. ton	27.50	28.50
Soda ash, rayon-type, \$15 ton higher. Prices in West 70c.		
beads for sale, and \$20-\$30 ton higher for Gran and		

Sodium bicarbonate, USP, powd., reg. grade, bgs., c.I., l.I. works, fr. equal.....	100 lbs.	17.05	..
coarse, same basis.....	100 lbs.	18.05	..
fine, same basis.....	100 lbs.	17.20	..
gran., same basis.....	100 lbs.	17.85	..
gran., fine, same basis.....	100 lbs.	17.80	..
Sodium bicarbonate, gran., bgs., c.I., l.I. works, fr. equal.....	100 lbs.	17.05	..
Sodium bifluoride, 400-lb. dms., c.I., fr. equal.....	..	..	78
100-lb. bgs., c.I., same basis.....	..	..	78
Sodium bisulfate, bulk, c.I. works.....	100 lbs.	175.00	..
dms., c.I.....	100 lbs.	13.00	..
Sodium bisulfite, anhyd. bgs., c.I., works, East.....	100 lbs.	23.50	..
works, West.....	100 lbs.	22.00	..
Sodium bisulfite, 30% pure, bulk, 100-lb. basis, works, East.....	100 lbs.	32.00	..
soln., 100% bulk, works, West.....	100 lbs.	20.00	..
photographic grade, 45% soln., photographic grade, 45% soln.....	21.00	..	..
Sodium borate NF, gran., bgs., c.I. works.....	..	..	51
powd., same basis.....	..	..	52
Sodium borate, 100-lb. dms.....	..	..	68
1000-5000 lbs. works.....	17.85	21.80	..
Sodium borohydride, stabilized water soln., 12% NaBH ₄ , 100% basis.....	200 gal. tankage, works.....	19.48	..
Sodium bromide, 99% gran., 400-lb. dms., f.o.b. works.....	..	..	1.04
Sodium carbonate, decahydrate, bgs., c.I., l.I. works.....	ton	284.00	..
Sodium carbonate, cryst. monohydrate, bgs., c.I., l.I. works.....	ton	392.00	..
Sodium carbonate, methyl cellulose (see CMC)	..	..	..
Sodium chloride, bulk, f.o.b. works.....	ton	420.00	44.00
Sodium chloride, cryst., 450-lb. dms., c.I., works.....	..	..	27
Sodium chloride, tech., 50-lb. dms., c.I. works.....	..	..	29
Sodium chloride, USP, gran., bgs., c.I. works.....	..	..	1.17
Sodium chromate, tech., dms., c.I. works.....	..	..	1.27
Sodium chromate, anhyd. dms., c.I., f.o.b. works.....	..	..	67
Sodium chromate, tetrahydrate tech., c.I., l.I. works.....	..	..	64
Sodium chromate, gran., anhyd., 200-lb. dms., c.I., l.I. works.....	..	..	1.95
Sodium citrate, USP, gran. dihydrate, 100-lb. bgs., l.I. f.o.b. shipping point.....	..	..	74½
Sodium citrate, dms., 50-lb. dms., works.....	..	..	85
Sodium cyanide, bulk, 100-lb. dms., 99% min., 200-lb. dms., min., f.o.b. works.....	..	..	68
Sodium diacetate, anhyd. dms., c.I. works.....	..	..	68
Sodium diacetate, FCC, 50-lb. bgs., l.I. div. E of Rockwell.....	..	..	67
Sodium disulfate, tech., 50-lb. dms., c.I. works.....	..	..	51
Sodium erythronate, powd., gran. l.I. or mixed l.I., f.o.b. shipping point.....	2.80	2.85	..
Prices W. of Denver 2c. per pound higher.	..	..	..
Sodium ferrocyanide, bgs., l.I., works.....	..	..	80
Sodium formate, tech. gran., dms., l.I. works, fr. equal.....	..	..	1.77
Sodium fluoride, white, 97%, 400-lb. dms., c.I. works, fr. equal.....	8345	..	..
100-lb. bgs., c.I. same basis.....	..	..	80
USP powd., 100-lb. dms., c.I., f.o.b. shipping point.....	4.69	..	..
Sodium formate, bgs., c.I., 50-lb. bgs., sodium gluconate, tech., 50-lb. bgs., 2-500 lbs. or more, fr. equal.....	80	..	..
Sodium hydride, oil dispersion, 60% NaH, 167-lb. dms., 10 dms., works.....	1.86	..	..
Sodium hydroxide (see Sodium sulfhydrate)	..	..	..
Sodium hydroxide, dms., c.I., l.I., f.o.b. shipping point.....	64	..	..
Sodium hydroxide, USP, pellets, 100-lb. dms., c.I., l.I. works, fr. equal.....	95	98	..
Sodium hydroxide, tech. (see Soda, caustic)	..	..	..
Sodium hypophosphite, EN grade, 300 to 1100 lb. dms. f.o.b. works.....	1.428	1.80	..
Sodium hypophosphite, tech., 300 to 1100 lb. dms. f.o.b. works.....	1.47	1.52	..
Sodium hyposulfite (see Sodium thiosulfate)	..	..	..
Sodium iodide, USP, cryal., 300 to 500-lb. lots, dms. fr. equal.....	14.72	..	..
Sodium lauryl sulfate, 30% tankage, f.o.b. works.....	29	32	..
Sodium lignin sulfonate, bgs., c.I., works.....	25.60	..	..
Sodium metabisulfite (see Sodium bisulfite)	..	..	..
Sodium metaborate, tech., 50-lb. dms., gran., bgs., c.I. works.....	38	..	..
Sodium metasilicate, gran. bgs., c.I., works.....	49	..	..
works.....	..	..	83
19-lb. dms. basis, gran., c.I. works.....	57	..	..
fused, dms., 24,000-lb. lots or more, works.....	70	80	..
100-lb. dms., c.I., f.o.b. shipping point.....	61.50	..	..
100-lb. dms., c.I., f.o.b. shipping point.....	62.25	..	..
Sodium metasilicate, anhyd. bgs., c.I. works.....	27.25	..	..
bulk, c.I. works.....	25.50	..	..
pentahydrate, bgs., c.I., works.....	16.95	..	..
100-lb. dms., c.I. works.....	17.20	..	..
Sodium molybdate, anhyd., dms., f.o.b. works, 100-lb. lots.....	4.37	..	..
cryst. dms., l.I. same basis.....	4.12	..	..
Sodium naphthalene, dms., c.I., l.I., works.....	2.00	..	..
Sodium nitrate, USP, bgs., c.I., l.I. works.....	34.60	..	..
Sodium nitrate, tech., industrial, bgs., c.I. works.....	294.00	292.00	..
bulk, c.I. works.....	280.00	..	..
imp. comp., 100-lb. bgs., c.I. Aid. or Gulf white.....	225.00	214.00	..
bulk, c.I. same basis.....	82.00	..	..
Soln., agricultural, bulk, c.I. same basis.....	140.00	..	..
Sodium nitrite, USP, dms., c.I. works.....	..	..	..

Sodium orthosilicate, tech., anhyd., bgs., c.I., works.	100 lbs.	34.50	
Sodium orthosilicate, tech., hydrated, flake, dms., c.I., works.	100 lbs.	27.46	
bgs., c.I., works.	100 lbs.	28.25	
Sodium silicate, 90% bgs. basis	lb.	.67	
Sodium pentachlorophosphate, basic, c.I., 30,000-lb. min.	100 lbs.	.45	
bgs.	100 lbs.	.66	
Sodium tetraborate (see tetraboric acid-sodium)			
Sodium perborate, tetrahydrate, tech., bgs., c.I., works.	100 lbs.	.32 1/2	
Sodium persulfate, 225-lb. bags, 24,000 lbs. or more, f.o.b. plant	lb.	.83 1/4	
55-lb. same basis	100 lbs.	.62	
Sodium phenoborate (see Phenoborate-Sodium)			
Sodium phenosulfonate, powd., dms., tech., bgs., c.I., works.	100 lbs.	.76	
Sodium phosphate, anhyd., dibasic, tech., bgs., c.I., works, frt. equiv.	100 lbs.	54.50	
food grade, same basis	100 lbs.	57.50	
Sodium phosphite, monobasic, tech., same basis	100 lbs.	55.75	
food grade, same basis	100 lbs.	59.75	
tribasic, tech., same basis	100 lbs.	52.25	52.25
food grade, same basis	100 lbs.	63.25	
chlorinated, same basis	100 lbs.	31.60	
tech., same basis	100 lbs.	30.50	
cryst., food grade, same basis	100 lbs.	35.50	
USP, dried, powd., bgs., dms., works	100 lbs.	.19	
Sodium permanganate, tech., dms., 200-lb. dms., dry basis, dhd.	100 lbs.	.54	
Sodium propionate, dms., 2,000 lbs. or more, f.o.b. frt. equiv.	100 lbs.	59.25	
Sodium pyrophosphate, anhyd., c.I., works, frt. equiv.	100 lbs.	61.25	
food grade, non-leavening, bgs., c.I., works, frt. equiv.	100 lbs.	38.80	
Sodium pyrophosphate, ferriac, dms., c.I., works	100 lbs.	44.75	
Sodium pyrophosphate, tetrabasic, anhyd., tech., bgs., c.I., works, frt. equiv.	100 lbs.	42.50	
bulk, hopper cars, same basis	100 lbs.	53.00	
food grade, bgs., c.I., works	100 lbs.	53.00	
Sodium salicylate, USP, cryst., 200-lb. dms., 1,000-lb. lots or more, works, frt. equiv.	100 lbs.	3.00	
USP, powd., 200-lb. dms., 1,000-lb. lots or more, same basis	100 lbs.	3.05	
Sodium sesquicarbonate, bulk, c.I., works	100 lbs.	170.00	
bgs., c.I., works	100 lbs.	198.00	
Sodium silicate, solid, or tech., 3:2:2 ratio, bulk, c.I., works	100 lbs.	15.70	
bgs., c.I., works	100 lbs.	27.75	
1:95:2 ratio, bulk, c.I., works	100 lbs.	20.30	
bgs., c.I., works	100 lbs.	22.15	
soln. 37.6° solid, 3:2:2-3:25 ratio, bulk, c.I., frt. equiv.	100 lbs.	6.30	
"Ratio" indicates percentage by weight of SiO ₂ divided by percentage by weight of Na ₂ O			
Sodium silicofluorides, bgs., c.I., works, frt. equiv.	100 lbs.	17.95	19.75
Sodium stannate, dms. wks. frt. adv. E. b	N.A.	N.A.	
Sodium sulfamate, dms. works	100 lbs.	.22	
Sodium sulfite, NF XII, powd., dms., 2,000-lb. lots or more, tech., detergent, rayon-grade, works	100 lbs.	23 1/4	
Sodium sulfate, West, bulk, c.I., works, frt. equiv.	100 lbs.	90.00	96.00
Sodium sulfate, East, bulk, c.I., works, frt. equiv.	100 lbs.	99.00	101.00
Sodium sulfate, photo grade, 100-lb. bgs., c.I., works	100 lbs.	113.00	114.00
Sodium tetracyanide, tech., 70-72% dms., c.I., works, frt. equiv.	100 lbs.	47.00	53.00
liq., 44-46%, tanks, works, frt. equiv.	100 lbs.	500.00	
Sodium tetraborate, basic, c.I., works, E, frt. equiv.	100 lbs.	500.00	
bgs., same basis	100 lbs.	470.00	
Sodium sulfate, fused, dms., c.I., works, frt. equiv.	100 lbs.	410.00	
Sodium sulfate, anhyd., tech. 95-100% bgs., f.o.b. works	100 lbs.	240.00	
Sodium sulfolene oxide CP (see Sodium thionates)			
Sodium tetraborate, tech., 34% dms., c.I., works, frt. equiv.	100 lbs.	3.26	
Sodium thionates, purif., cryst., 250-lb. dms., 5 dms. or more, f.o.b. works	100 lbs.	.97	
tech., anhyd. dms., 2,000 lbs. or more, works	100 lbs.	45.60	
Sodium thiosulfate, photo-grade, anhyd., 100-lb. bgs., works, frt. equiv.	100 lbs.	26.50	
cryst. pentahydrate, c.I., same basis	100 lbs.	14%	
Sodium thiosulfate, 95% 50-lb. bgs., c.I., frt. adv. E.	100 lbs.	.28	
Sodium tripolyphosphate, tech., bgs., c.I., works, frt. equiv.	100 lbs.	39.75	
bulk, hopper cars, same basis	100 lbs.	37.50	
food grade, bgs., c.I., same basis	100 lbs.	48.60	
Sodium tungstate, tech. high moly. temp., 10,800 lbs. or more, frt. adv.	100 lbs.	5.00	5.50
Folin grade dms., 10,800 lbs. or more, frt. adv.	100 lbs.	8.00	
Sodium-zincronium phosphate, purif., dms., tech., works	100 lbs.	.52	
Sodium-zincronium phosphate, purif., dms., tech., works	100 lbs.	.91	
Sodium-zincronium sulfate, dms., 1,000-lb. lots or more, works	100 lbs.	.28	
tech. dms. any quantity	100 lbs.	.16	
Solvent acetone, petroleum, straight aromatic, b., 320-350° F.	gal.	1.52	
New Jersey	gal.	1.41	
Houston	gal.	1.54	
Solvent acetone, petroleum, straight aromatic, b., 360-380° F.	gal.	1.30	1.35
New Jersey	gal.	1.30	
Houston	gal.	1.30	1.35
Amco			

	Sorbitan monooleate, dms., c.i., l.l.	f.o.b.	
	30,000 lb. min., f.o.b. works	lb.	
	Sorbiten tetrastearate, c.i., l.l., 30,000 lb.	min., f.o.b. works	lb.
	Sorbital, USP, reg. 70% aqueous	dms., c.i., f.o.b. shipping point	lb.
76	tanks, f.o.b. shipping point	lb.	3
	gran, dms., c.i., l.l. works	lb.	7
	powd., dms., c.i., l.l. works	lb.	8
	Soybean meal (See Oils, Fats & Waxes market rep)		
	Soybean oil acidulated, soapstock,	90% acid tanks, New York	lb.
80½	Soybean oil, acid, dist., abs., dms.	tanks	45
	s.d., dms.	lb.	47
	Spearmint leaves, imp. bulk	lb.	38
	Spearmint oil, Far West, native	lb.	14.00
	Midwest, native	lb.	10.00
	Far West, Scotch	lb.	15.00
	Midwest, Scotch	lb.	14.50
	Spruce oil, dms.	lb.	8.00
	St. John's bread, edible, bts.	lb.	29
	25Stannic chloride, anhyd., dms., works	lb.	N A
	Stannic oxide, dms., works	lb.	N A
	Stannous chloride, anhyd., dms wks	lb.	N A
	Stannous fluoborate, liq., conc. dms.	lb.	2.50
	Stannous fluoride, lit. equivl.	lb.	2.50
	Stannous oxide dms. works	lb.	2.50
	Stannous sulfate, dms. works	lb.	N A
	Stearyl acid, double pressed, bulk	lb.	26
	single-pressed, bulk	lb.	28
	Tar, pressed, bulk	lb.	32
	Stramonium leaves, bgs.	lb.	15
	Streptomycin sulfate, USP, bulk	kilo	47.00
	Strontium carbonate, glass grd., bgs.	lb.	37½
	Lt. work, 50-15 bgs.	100 lbs.	51.50
	Strontium nitrate, 50-15 bgs.	c.i., f.o.b. plant	lb.
	Styrene monomer, 99.9% min. t.c.	lb.	21
	Styrene-maleic anhydride resin, nat'l.	f.o.b. plant	lb.
	cryst, bulk, same basis	lb.	77
	card, same basis	lb.	77
	Sucroalacetate, dms.	lb.	2.95
	Succinic acid, purif., cryst., dms., l.l.	frl. acid	lb.
	Succinyl anhydride, dms., c.i., l.l., f.o.b.	work	2.00
	Sucrose, ref., white, bgs., c.i., f.o.b.	rely. E	100 lbs.
	Sucrose acetates, isobutyrate, 90%	dms., l.l. divid.	lb.
	tanks, divid.	lb.	1.10
	100%, dms., l.l. divid.	lb.	1.18
	Sucrose octa-acetate, denaturing grade, 100 lb. dms., f.o.b. kilo	works	12.50
	Sulfabenzamide, dms., 500 kilos. Jao.	lb.	39.50
	Sulfabenzamide-sodium, dms., 500	kilos.	25.00
	Sulfacetic acid, USP, dms., 500	kilos.	20.00
	Sulfadiazine, USP, powd., dms., 500	kilos.	53.00
	Sulfadiazine-sodium, USP, dms., 500	kilos.	40.70
	Sulfamerazine, USP, microcrystals,	dms., 500 kilos.	33.50
	USP, powd., dms., 500 kilos.	lb.	32.00
	Sulfamerazine-sodium, USP, powd.,	dms., 50 kilos.	13.00
	Sulfamethazine, powder, dms., 500	kilos.	9.50
	Sulfamic acid, cryst., bgs., c.i., l.l.	works	100 lbs.
	Sulfamo acid, gran., dms., c.i., l.l.	works	38
	Sulfonamide, NF, reg. 1,000-lb. dms.	lit. equivl.	2.00
	Sulfur, acid, isot., bgs., Li., f.o.b.	Alaska, Alaska	87½
	Sulfuradoxaline, veterinary, grad.	dms.	8.00
	Sulfur, crude, bright, molten, dom., f.o.b.	Alaska, Alaska	150.00
	f.o.b. La. rely	long-ton	125.60
	recovered, dms., Houston	long-ton	125.50
	extermal, Rotterdam	long ton	135.00
	50-lb. Albers, Canada	delivery	102.00
	dark, ex-Tampa, Fla.	long-ton	157.50
	Sulfur, crude, 99.95% min. purity, coml.	four, 50-lb. bags, c.i. mines	13.80
	basis	100 lbs.	13.80
	lump, same basis	100 lbs.	13.80
	Sulfur, reld., 99.95% min. purity, rols	50-lb. bags, c.i. mines	17.50
	bas.	100 lbs.	17.50
	flour, light, 50-lb. bgs., same bas.	100 lbs.	39.50
	Sulfur, sublimed, 99.95% min. purity	coml. four, 50-lb. bags, c.i. mines	25.00
	dms., 88% min. passing through #25	mesh, same basis	100 lbs.
	Sulfur dichloride, dms., c.i., works, lit.	equivl.	24
	tanks, same basis	lb.	17½
	Sulfur dioxide, liq., coml. multi-unit	pals, dms., f.o.b. works	ton
	Sulfur trioxide, 98% min. purity	coml. four, 50-lb. bags, c.i. mines	275.00
	Sulfur monochloride, dms., c.i., works,	lit. equivl.	210.00
		lb.	22½

CHEMICAL PRICES

WEEK ENDING AUGUST 8, 1986

[illegible]

ALWAYS BUYING & SELLING SURPLUS PLANTS & EQUIPMENT

DIVISION ARECO, INCORPORATED
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 TX 28 9454 CABLE AARHMECO

CHEMICAL PROFILE

FUMARIC ACID

AUGUST 11, 1986

SUPPLY

PRODUCER	CAPACITY*
Denka, Duluth, Minn.	6
Pfizer, Terre Haute, Ind.	30
Total	36

*Millions of pounds annually. Denka acquired its Duluth fumaric acid facility, along with maleic acid capacity at the site, from Alberta Gas Chemicals, Inc. in July of last year. Kalama Chemical shut its 10-million-pound-per-year plant in Garfield N.J. last quarter. The plant is ready for startup on short notice if market conditions warrant. Monsanto's 30-million-pound-per-year plant in St. Louis, Mo. remains idle. Monsanto and Pfizer share the output of Pfizer's plant in Terre Haute. US Diversified Group, an operating unit of the newly-named USX Corporation, will not restart fumaric acid production at its 10-million-pound-per-year unit in Neville Island, Pa. Fumaric acid production was halted there in February 1983. Profile last published 7/4/83; this revision; 8/11/86.

DEMAND

1985: 30 million pounds; 1986: 30 million pounds; 1990: 33.2 million pounds.

GROWTH

Historical (1976-1985): 0 percent per year; future: 2 percent per year through 1990.

PRICE

Historical (1982-1986): High, 67c. per pound, tech., c.i., t.l., f.o.b. works, frt. equal; low, 17c. per pound, divd. Current: 62 1/2c. per pound, tech. same basis. 75 1/4c. per pound, food-grade, same basis.

USES

Paper size resins, 48 percent; food acidulant, 20 percent; unsaturated polyester resins, 16 percent; alkyds, 5 percent; exports, 5 percent; miscellaneous, 6 percent.

STRENGTH

In the past three years, idled facilities and capacity shutdowns have turned a severe oversupply into a well balanced supply/demand situation. Fumaric acid is less costly than citric acid, its primary competitor in food uses.

WEAKNESS

Maleic anhydride, used in unsaturated polyester resins, has stunted fumaric acid's growth in that application. Fumaric acid is less soluble than citric acid and therefore less desirable in some food uses.

OUTLOOK

Fumaric acid is a mature product. At best, growth will match GNP over the next five years.

PLATFORM

'Acceptable' Risk

The following remarks are excerpted from a speech by Milton Russell, assistant EPA administrator for policy planning and evaluation, to the Texas Water Pollution Control Association.

Once we found pollution with our eyes and noses. Now we use GCMSs to measure it in parts-per-million, parts-per-billion, even parts-per-quadrillion. But this information is useful only if we can figure out what it means for human health and the environment. We are back to the question, "What is the risk?"

We need to ask what "parts-per-trillion" of a given toxin means. To find a toxin is not to conclude we must remove it. In a world of limited resources, that conclusion would lead to chasing ever smaller quantities of a pollutant at exponentially rising expenditures of labor, dollars and scientific and engineering talent.

There are more toxins—natural and man-made—in this life than any of us can ever hope to eliminate. A brute fact should be engraved on our consciousness: given finite resources, when we choose to reduce one toxin, we also choose to tolerate another. And, even where we concentrate on one toxin—whether it be PCB or dioxin or whatever—we cannot expect to achieve perfection. This leads me to believe we need a stopping point, a point at which we will agree that we have cleaned up far enough in a given case, and it is time to turn to another.

What is the basis for stopping? In my judgment it has little to do with the specific toxin or its concentration and much to do with the risk it poses to people and the environment. If our goal is not purity, or even neatness for its own sake, we must identify risk and reduce it to the point at which it becomes acceptable to our society—thus, the concept of "acceptable risk."

The difficulty of this question for a public policy maker is that it is not scientific, technical or administrative in nature. The question is basically sociological, and it pertains at two levels: generally, in the case of national policy, and specifically, in the case of local situations.

In the first case, we must ask ourselves what kind of society we really want, what values we expect our national policies to reflect. The American people want a safe and healthy environment, but they want other things, too. They want a strong national defense, first-rate transportation, better and cheaper medical care, good homes, labor-saving appliances, a varied diet and entertainment. Those who uphold the environment as a primary value compete daily with the advocates of these other worthy objectives. Our job at EPA is to effectuate as best we can, under the laws, the decisions of the American people as to these painful trade-offs.

Two years ago, Tacoma, Washington, faced a threat to a smelter that played an important role in the community economy. The trouble was arsenic emissions that we at EPA found to be a source of risk to the public health. Our administrator at that time, Bill Ruckelshaus, believed, as I do, that finding and quantifying risk is one thing. What you do about it is another. Ruckelshaus went to Tacoma and talked with the people there. Here were the clear facts about the danger of cancer. Here were the clear facts showing that reducing that risk as far as possible would be so costly that the plant management would have to consider shutting down. Was it better to accept elevated rates of disease in the community? Or to accept lost jobs, a weakened economy and the individual distress that would yield? There was no lady—just two tigers. Tacoma answered, "some of both." They wanted us to reduce the health risk as far as possible, but not so far as to endanger the plant's survival. As it happens, the plant closed down for other reasons. But the case is instructive.

Risk is acceptable to different people under different circumstances. But neither government nor the people affected can make a reasonable decision unless the risks and implications of reducing them are known.

The Whole Message

The following remarks are excerpted from a speech by Jackson Browning, vice-president for health, safety and environmental affairs for Union Carbide Corporation, to the Environmental Conference in Cleveland, Ohio.

Chemical production today must be done in a way that responds to a whole range of pressures and demands—for quality, for purity, for cost, for environmental regulations, for concern for employees, concern for the environment, and on and on. If a chemical company doesn't respond adequately to all of these requirements—in other words, if it doesn't get the whole message—then the company is not going to be viable for long in today's world.

It seems to me that if our companies are to get the whole message, then we risk managers, safety people, or environmental experts—call us what you will—must be part of the team.

But, we've got to be able to contribute more than just a technical understanding of what must be done in the health, safety, and environmental area. We've got to be prepared to bring a certain kind of sensitivity to the process, a sensitivity to public fears and concerns, as well as to the regulatory requirements.

The fellow living across the street from our plants really has only one interest. He simply wants to feel secure. He wants to sleep soundly at night knowing that we've got the lids screwed on tightly.

JOBS & PEOPLE



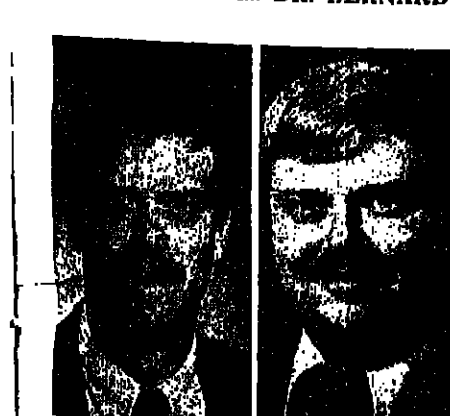
Dale H. Spess, who has been named group vice-president of sales and marketing services for Enron Chemical Company. He was previously group vice-president of converted products.

DAVID K. SEIFERT has joined M&T Chemicals Inc. as manager of operations analysis.

WALLACE N. COX has been appointed a technical representative in the chemicals laboratory at Eastman Chemical Products Inc. JERRY A. WINDISCH has been named account supervisor for organic resin sales in the technical marketing group of Hercules Incorporated.

MICHAEL J. SCHERER has been appointed technical director of polysulfide applications and technical service for Morton Chemical Division. PAUL C. KENDALL has been named technical sales representative for Bioguard's Chemical Specialties Division. J. RICHARD WEBB has been appointed president of Ptauder Company, a unit of Standard Oil.

TERI S. LEBEAU has been named business manager for organic intermediates in the chemicals and metals product department at Dow Chemical USA. DR. BERNARD D.



D. Seifert W. Cox M. Scherer T. Lebeau

PQ Corporation Names Area Sales Managers

PQ Corporation has named D. Neil Fleming Eastern area sales manager and Rosalyn T. Kutchins Western area sales manager, both in the Industrial Chemicals Division.

Mr. Fleming will be responsible for the territory covering New England, Pennsylvania, Maryland, South Jersey, Virginia, West Virginia, North Carolina and South Carolina.

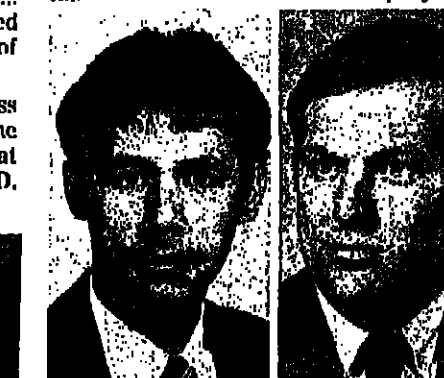
Miss Kutchins' territory includes California, Washington, Oregon, Nevada and Arizona.



D. Fleming R. Kutchins

BAUMAN has been appointed manager of technology and commercial development in Air Products & Chemicals Inc.'s surface treated products department.

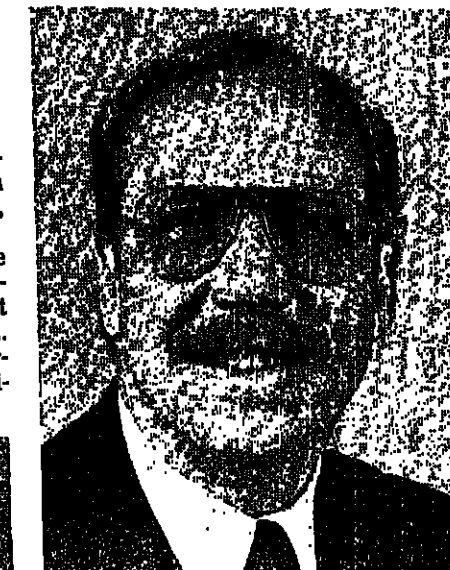
GERALD P. FRANCO has been named marketing services representative for Pennwalt Corporation's Lucidol Division. LINDY GULBRANDSEN has been appointed sales representative for the New York metropolitan area for John H. Calo Company Inc.



J. Windisch M. Scherer

STEVEN B. GREENFIELD has been named group product manager for Hoechst-Roussel Agri-Vet Company.

FRANK J. POPOLA has joined Norton-Performance Plastics as a senior process engineer. HELMUT K. MAIER has been named manager of technology transfer in the International Division of Economics Laboratory



P.E. Bach, who has been appointed vice-president of the chemical business center at USI Chemicals, a division of National Distillers & Chemical Corporation.

Inc. VERNELL P. LUDWIG has been appointed executive vice-president of Algonquin Energy Inc., a subsidiary of Texas Eastern.

PETER K. GRIBBLE has been named associate director of industrial coatings at Glidden Coatings & Resins and CARLOS E. ORTIZ has been appointed technical manager for powder. LEONARD J. BOEHM has been named vice-president of marketing and sales at CasChem Inc.

NICHOLAS A. VITTORE has been named director of quality excellence for Desoto Inc.'s Chemical Products, Chemical Specialties and Royal divisions and LESTER A. HENNING has been appointed director of quality excellence for the company's Chemical Coatings Division. JOHN MURPHY has been named sales specialist for the textile care business of Diamond Shamrock Chemicals Company.

STEVEN S. COWELL, ALBERT P. HALUIN, KATHERINE A. RUSSEL and R.



T. Lebeau B. Bauman

SCM Pigments Picks Two Vice-Presidents

SCM Pigments has appointed J. Corson Smith vice-president of sales and David L. Vercolone vice-president of marketing and sales.

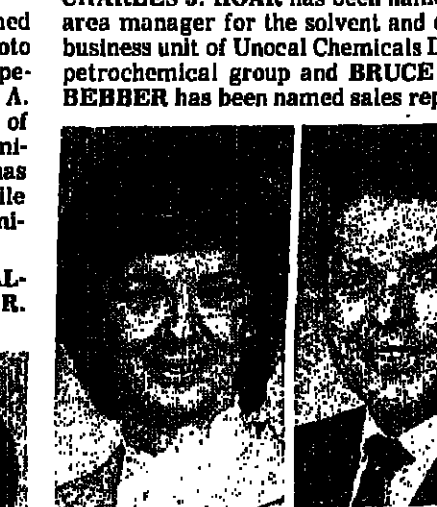
Mr. Smith will be responsible for implementation, direction and execution of sales strategies. He was previously vice-president of marketing for titanium dioxide and titanium tetrachloride.

Mr. Vercolone will be responsible for the planning, direction and execution of marketing and sales strategies and programs for all US products of SCM Pigments.



J. Smith D. Vercolone

JEFFERSON WORKS have been named vice-presidents at Cetus Corporation. CHARLES J. HOAR has been named senior area manager for the solvent and chemical business unit of Unocal Chemicals Division's petrochemical group and BRUCE R. VAN BEBBER has been named sales representative for the division.



T. Lebeau B. Bauman

JOHN GUIDICE, RICHARD CLAWSON and PORTER BOLTZ have been named account managers for National Starch & Chemical Corporation's Adhesives Division, and ARTHUR EPP, WILLIAM J. KLUCKER and KEITH MILLER have been named account supervisors for the division.

MEETINGS CALENDAR

AUGUST 11, 1986

THIS WEEK

AMERICAN CHEMICAL SOCIETY, chemical marketing and economics division, seminar on R&D management, Princeton-Princeton executive conference center and hotel, Princeton, N.J., August 13-15.

THIS MONTH

AMERICAN INSTITUTE OF CHEMICAL ENGINEERS, Summer national meeting, Sheraton Boston Hotel, Boston, Mass., August 24-27.

LATER ON

AMERICAN CHEMICAL SOCIETY, 182nd annual meeting, Anaheim Convention Center, Anaheim, Calif., September 7-12.
AMERICAN MICROCHEMICAL SOCIETY, eastern analytical symposium, jointly with American Chemical Society and Society for Applied Spectroscopy, New York Hilton Hotel, New York, October 20-24.
AMERICAN PETROLEUM INSTITUTE, annual meeting, San Francisco, Calif., November 9-11.

ASSOCIATION OF OFFICIAL ANALYTICAL CHEMISTS, 100th International meeting and exhibition, The Regency Hotel, Scottsdale, Ariz., September 15-18.
ASSOCIATION OF THE NON-WOVEN FABRICS INDUSTRY, eighth International conference and exhibition, Georgia World Congress Center, Atlanta, Ga., October 21-23.

CANADIAN CHEMICAL PRODUCERS ASSOCIATION, International symposium on transportation emergency response, Vancouver, B.C., Canada, September 14-18.

CHEMICAL GROUP, NATIONAL ASSOCIATION OF PURCHASING MANAGEMENT, Fall Conference, Marriott Pavilion Hotel, St. Louis, Mo., October 21-23.
CHEMICAL MARKETING RESEARCH ASSOCIATION, world chemical congress, jointly with the chemical marketing and economics division of the American Chemical Society, "The Chemical Industry: Where in the World is it Going?", Newport Resort Hotel, Newport Beach, Calif., September 7-10.

CHEMICAL SPECIALTIES MANUFACTURERS ASSOCIATION, seminar on aerosol technology, Ramada Hotel, O'Hara, Rosemont, Ill., October 27-29; 73rd annual meeting, Marriott's Harbor Beach Resort, Fort Lauderdale, Fla., December 7-11.

CHLORINE INSTITUTE, Fall meeting, The Homestead, Hot Springs, Va., September 21-25.
COMMERCIAL DEVELOPMENT ASSOCIATION, Impact of mergers and acquisitions on the future of technology-driven corporations, Hershey Hotel, Hershey, Pa., October 28-29.

CONFERENCE BOARD, business outlook conference, Waldorf-Astoria Hotel, New York, September 24-25.
COUNCIL FOR CHEMICAL RESEARCH, annual meeting, Northwestern University, Evanston, Ill., September 29-30.

COUNCIL FOR RESPONSIBLE NUTRITION, annual meeting, "Health Messages: New Directions and New Opportunities," J.W. Marriott Hotel, Washington, D.C., September 7-10.

EUROPEAN PETROCHEMICAL ASSOCIATION, annual meeting, Monte Carlo, Monaco, September 28-October 1; distribution meeting, October 19-October 22.

FERTILIZER INSTITUTE, world fertilizer conference, "Global Trading Patterns," Hyatt Regency Hotel, San Francisco, Calif., September 14-18.
FERTILIZER ROUND TABLE, Sheraton Inner Harbor Hotel, Baltimore, Md., November 17-18.
FIRE RETARDANT CHEMICALS ASSOCIATION, Fall conference on proper processing and selection of

flame retardants, Kiawah Island, S.C., October 19-22.
FRAGRANCE MATERIALS ASSOCIATION OF THE UNITED STATES, 10th International congress of essential oils, fragrances and flavors, Omni Shoreham Hotel, headquarters hotel, Washington, D.C., November 16-20.

K-88, 10th International trade fair for plastics and rubber, Düsseldorf, West Germany, November 8-13.

LATIN AMERICAN PETROCHEMICAL ASSOCIATION, sixth annual meeting, Rio Palace Hotel, Rio de Janeiro, Brazil, November 23-25.

NATIONAL PAINT & COATINGS ASSOCIATION, 96th annual meeting, Atlanta Hilton Hotel, Atlanta, Ga., November 3-5.

PULP CHEMICALS ASSOCIATION, 13th International naval stores meeting, Waldorf-Astoria Hotel, New York, September 15-17.
SOCIETY OF CHEMICAL INDUSTRY, chemical industry medal dinner, Plaza Hotel, New York, October 18.
SOCIETY OF CHEMICAL INDUSTRY, chemical industry medal dinner, Plaza Hotel, New York, October 18.
SYNTHETIC ORGANIC CHEMICAL MANUFACTURERS ASSOCIATION, OSHA compliance trade fair and seminar, Intercontinental Hotel, New Orleans, La., September 25-28.

BUSINESS BRIEFS

'AVID', a miticide/insecticide marketed by MSD Agvet, has been granted Federal registration for control of two spotted spider mites and leafminers on flower crops, foliage plants and other non-woody ornamental plants. Spider mites and leafminers pose a serious threat to the nation's floral and foliage crops, which represent a wholesale value of over \$1 billion annually.

BOEHRINGER BIOCHEMICALS, Indianapolis, has been appointed the sole US distributor of T Cell Sciences Inc.'s monoclonal antibody-based research products. These products include the "Cellfree" interleukin-2 receptor test kit, which measures soluble, released interleukin-2 receptors in serum and other body fluids, and the "Act-T-Set"

monoclonal antibodies used to measure the various stages of the immune response.

DU PONT maintenance management services says it has developed a software package to increase the productivity and effectiveness of plant maintenance programs. The software performs such functions as tracking equipment history and costs, planning and scheduling work, controlling spare parts inventory and work orders, scheduling preventative maintenance and accumulating maintenance costs, according to Du Pont.

is a subsidiary of Boots PLC, the UK chemical and pharmaceutical firm.

FERMENTA PLANT PROTECTION Company is adding botoxone, propanil and dinitro to its product line. These post-emergent herbicides will be incorporated into Fermenta's agriculture business and will increase the firm's presence in the agricultural markets, Fermenta says. Fermenta is based in Painesville, Ohio.

KEMIRA, INC. has introduced its "Uniti" line of seven chemical compounds for industrial use, which are based on Kemira's chloride and sulfate titanium processes. Current applications include catalysts, pearlescent pigments, chrome pigments, ceramics, oil field drilling muds, chemical synthesis, abrasives and refractories.

LONZA INC. has published a new brochure, called "Pyrimidines, Pteridines & Purines," which focuses on synthetic routes to the manufacture of three classes of N-heterocyclic compounds. The 96-page brochure describes the synthesis and biosynthesis of the pyrimidine, pteridine and purine rings, and their industrial applications in agricultural and pharmaceuticals.

STOLT-NIELSEN INC. has completed the move of its ship management department from Greenwich, Conn. to Panama City, Fla. Stolt-Nielsen says it made the move in order to secure long-term overhead cost savings, to stay competitive with other ship managers operating internationally and to keep fleet management of Stolt Tankers' owned tonnage "in house."